

US EPA RECORDS CENTER REGION 5



465803

Monthly Oversight Report 22
ACS NPL Site
September 28, 2002 - November 1, 2002



BLACK & VEATCH

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Black & Veatch Special Projects Corp.

✓ KA,
12/04/02

USEPA/RAC VII
American Chemical Services RAO (057-ROBF-05J7)

BVSPC Project 46526
BVSPC File C.3
November 13, 2002

Mr. Kevin Adler
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report
No. 22 for October 2002

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 22 for October 2002 for the American Chemical Services Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbelllm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.
Site Manager

Enclosure

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Monthly Oversight Summary Report No. 22
ACS Superfund Site WA57, 46526.238

Reporting Period: Month of October (September 28, 2002 - November 1, 2002)

BVSPC O/S Dates: October 2, 3, 9, 10, 15, 17, 24, 25, 29, and 31, 2002

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Indiana Department of Environmental Management	1	
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	3	Electrical Contractor
Environmental Contractors of Illinois	8	OFCA Engineered Cover Contractor
Mid-America Lining Company	2	OFCA Engineered Cover Lining Installation Contractor
Ryan Construction	3	General Contractor
Hard Hat Services, Inc.	5	ONCA SBPA Interim Cover Contractor
Area Survey	2	ONCA SBPA Interim Cover Surveyor
Great Lakes Soil & Environmental Testing	2	ONCA SBPA Compaction Testing Contractor
Boart Longyear Associates	7	ONCA SBPA ISVE Well Driller
Everest VIT	1	OFCA ISVE System Thermal Oxidizer Inspector

Construction Activities

Major Activities:

- Environmental Contractors of Illinois completed the Off-Site Containment Area engineered cover and demobilized from the site.
- Mid-America Lining Company repaired the flexible membrane liner boot at Off-Site Containment Area in-situ soil vapor extraction system well SVE-38.

- Hard Hat Services, Inc. completed installing the piping for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system and placing and compacting the clay for the interim cover.
- Great Lakes Soil & Environmental Testing completed testing the compaction and moisture of the interim clay cover for the On-Site Containment Area Still Bottoms Pond Area.
- Ryan Construction and Austgen connected MW-10C and MW-56 to the groundwater treatment plant system for future pumping from these wells.
- Boart Longyear Associates mobilized to the site and began drilling the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system wells.
- Montgomery Watson Harza held a Health and Safety Kick-off Meeting for Boart Longyear Associates on October 17, 2002.
- Montgomery Watson Harza operated the Off-Site Containment Area in-situ soil vapor extraction system until October 1, 2002, when the system shut down because of a high temperature alarm in the scrubber.
- Everest VIT investigated the condition of the Off-Site Containment Area in-situ soil vapor extraction system thermal oxidizer with a fiber optic camera to assess the damage to the unit.
- Montgomery Watson Harza resampled residential well PB-B.
- Montgomery Watson Harza cleaned out tank T-2 in the groundwater treatment plant in preparation for the installation of heat exchanger plates.
- Montgomery Watson Harza held weekly construction coordination meetings on October 3, 10, 17, 24, and 31, 2002.

Activities Performed:

Environmental Contractors of Illinois (ECI) completed placing the topsoil for the Off-Site Containment Area (OFCA) engineered cover and seeded the engineered cover. Montgomery Watson Harza (MWH) and ECI investigated the damage to OFCA in-situ soil vapor extraction (ISVE) well SVE-38. MWH and ECI removed the bentonite from the well saddle underneath the flexible membrane liner (FML). MWH and ECI observed that the well riser connected at the saddle was bent. MWH induced a vacuum at the well and found that the saddle and well remained intact. ECI replaced the stick-up riser for the well and placed bentonite around the saddle. ECI demobilized from the site on October 4, 2002. ECI returned to the site with Mid-America Lining Company (MAL) on October 10, 2002, in order to repair the damage to the OFCA ISVE well SVE-38. Black & Veatch Special Projects Corp. (BVSPC) observed MAL construct a test weld and install the boot at the well. BVSPC also observed MAL perform non-destructive field testing of the seams with a vacuum box. ECI replaced the root zone material and topsoil around the well.

Hard Hat Services, Inc. (HHSI) completed trenching and installing the conveyance piping for the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA). HHSI encountered several areas in the central portion of the SBPA that contained drums and drum debris. HHSI wore half-face respirators during trenching activities. MWH reported that the debris that was encountered was consistent with its findings during the Remedial Investigation. MWH reported that it did not believe that the debris encountered during the trenching activities indicated that a new buried drum disposal area had been found.

HHSI also encountered shallow debris in the northeastern portion of the SBPA. MWH decided to place the conveyance piping in this area at a shallow depth of 14 inches below subgrade elevation in order to minimize exposure to the buried debris and the possible need to upgrade to Level B PPE. The piping in this location is buried at a shallower depth than designed. MWH did not believe that this would pose a problem for the operation of the ONCA SBPA ISVE system. HHSI successfully pressure tested all of the SBPA ISVE piping. All of the drum debris removed during trenching activities was relocated and buried underneath the subgrade in an area outside of the SBPA ISVE well field, but underneath the cap.

HHSI imported clay and constructed the interim cover over the ONCA SBPA. Great Lakes Soil & Environmental Testing performed compaction and moisture testing of the clay cover. HHSI placed and compacted the 12-inch-thick interim clay cover in two 6-inch-thick lifts. HHSI received the geotextile for the ONCA gravel road and will begin constructing the road during the week of November 4, 2002.

Austgen and Ryan Construction installed electrical conduit and pipe connecting MW-10C and MW-56 to the groundwater treatment plant (GWTP) on October 4, 2002. During trenching activities, both an existing natural gas line and an electrical line were damaged. MWH had deenergized these lines prior to trenching to prevent any health and safety incidents. MWH reenergized the lines after they had been repaired. Austgen completed integrating the wells into the GWTP's programmable logic controller and installed the control panels. MWH expects to begin pumping 1 gpm from each of these wells during the week of November 4, 2002.

Boart Longyear Associates (BLA) mobilized to the site on October 17, 2002, for the installation of the ONCA SBPA ISVE wells. MWH held a Health and Safety Kick-off Meeting for BLA on October 17, 2002. BLA began installing the air sparge points using direct push technology on October 24, 2002, with a limited crew. BLA began drilling the ISVE wells on October 28, 2002, with its full crew. MWH and ACS performed ACS's health and safety training for BLA's crew. BLA is conducting air monitoring with a photoionization detector (PID) and reported results from 13 ppm to 400 ppm at the cuttings. BLA reported that PID results at the boundary of the exclusion zone were 1 ppm. BLA decontaminated its equipment at each hole and drummed the decontamination water for future disposal at the GWTP. BLA also wrapped cuttings from the drilling in plastic for future disposal. BLA expects to complete drilling activities in two weeks.

MWH reported that it revised the drilling activities in the ONCA SBPA to eliminate the requirement for split spoon sampling to ensure that the dual phase extraction wells do not extend into the clay layer. Instead, MWH decided that it would be more efficient to sample locations using the geoprobe at approximately every other well along the perimeter of the ONCA SBPA interim cover to determine the depth to clay in addition to sampling at the air sparge points. MWH also reported that it will pressurized the perimeter conveyance piping to 10 psi during drilling in order to alert BLA if the pipe is damaged during drilling activities.

MWH reported that it revised the yard piping details for the ONCA SBPA ISVE system. MWH reported that the only change from the approved design in the 100% Final Remedial Design Report is that the yard piping will be placed on top of the interim clay cover, not within it. MWH reported that the revised design

details will be submitted to the Agencies. MWH also reported that it is finalizing the design for the ONCA SBPA ISVE system blower shed.

MWH reported that the OFCA ISVE system thermal oxidizer and scrubber system operated until Tuesday, October 1, 2002, when a high temperature alarm was activated in the scrubber unit. Austgen was on-site and upgraded the control system for the unit. MWH removed the spray nozzle from the primary quench and inadvertently flooded the thermal oxidizer's heat exchanger. MWH proceeded to operate the system with ambient air in order to dry out the system. Everest VIT inspected the thermal oxidizer with a fiber optic camera in order to assess any damage to the unit. Everest VIT reported that unit appeared to be in good condition; however, some buildup in the system was observed. MWH reported that it expects to have the system running during the week of November 4, 2002.

MWH reported that it is negotiating the thermal oxidizer and scrubber units for the ONCA SBPA in-situ soil vapor extraction (ISVE) system. MWH may install a 2,000 scfm unit and initially use the unit for both the OFCA and ONCA ISVE systems until the existing OFCA unit is repaired.

MWH reported that the results from one of the residential well samples, PW-B, collected last month exceeded the method detection limit for bis-(2-ethylhexylphthalate). MWH resampled this residential well during the week of October 28, 2002.

MWH reported that it operated the GWTP at 40 gpm during the reporting period except when the GWTP was shut down for connecting to monitoring wells MW-10C and MW-56. MWH also ceased operating the GWTP on Monday, October 28, 2002, in order to clean out tank T-2, clean the sand filter, and change the demister. BVSPC asked Tom Tinics of MWH on October 29, 2002, whether MWH had obtained a confined space permit for the cleaning of tank T-2. Mr. Tinics reported that a confined space entry permit was not necessary because a large opening had been cut in the side of the tank, creating two openings in the tank. Mr. Tinics reported that this additional opening disqualified the tank as a confined space. Later in the afternoon of October 28, 2002, BVSPC observed Lee Orosz of MWH cleaning tank T-2 from inside the tank. During the weekly construction coordination meeting on October 31, 2002, BVSPC again questioned MWH about the permit requirements for the work in tank T-2. Mr. Orosz reported that tank T-2 remained a confined space and that MWH had measured the O₂ levels in the tank. Mr. Orosz proceeded to report that MWH ventilated the tank and sprayed water on the sludge in the tank to minimize the potential fumes prior to personnel entering the tank. Mr. Orosz reported that a confined space entry permit had been obtained for the cleaning of the tank. Mr. Orosz also reported that BVSPC was misinformed on October 29, 2002, regarding the status of the tank and the permit requirements. MWH reported that tank T-2 was not a confined space after the sludge had been cleaned out this week. MWH reported that the heat exchanger plates will be installed in the tank next week. MWH expects to resume operating the GWTP at full capacity once the heat transfer plates are installed.

Attached are BVSPC weekly reports No. 83 through 87, correspondence, log book notes, and photographs of the daily activities. BVSPC's crew conducted oversight of the major field activities on October 2, 3, 9, 10, 15, 17, 24, 25, 29, and 31, 2002. BVSPC's crew attended five weekly construction coordination meetings at the site on October 3, 10, 17, 24, and 31, 2002.

Topics of Concern:

- HHSI encountered drums and debris during trenching activities in the ONCA SBPA.
- HHSI encountered drum debris in the northeast portion of perimeter trench C.
- MWH conveyed incorrect information regarding whether the work in tank T-2 required a confined space entry permit.

Concern Resolution:

- MWH reported that the drums and debris encountered were consistent with the findings of the RI and did not believe that a new buried drum debris area had been encountered.
- MWH decided to minimize the depth of trench C in the area of debris in order to minimize upgrades to Level B PPE. The conveyance piping placed in this area is at a shallower depth than designed.
- MWH resolved the discrepancy in the communications and reported that it had obtained a permit for working within the confined space.

Upcoming Activities:

- HHSI to install the geotextile and gravel for the ONCA SBPA road.
- BLA to continue drilling the ONCA SBPA ISVE wells.
- MWH to resume operating OFCA ISVE thermal oxidizer and scrubber system.
- Austgen to install pumps and begin integrating MW-10C and MW-56 into the GWTP.
- Ryan Construction to install heat transfer plates in tank T-2.

Signature: Leigh Peters

Date: November 4, 2002

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Weekly Oversight Summary Report No. 83
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of September 30, 2002

BVSPC O/S Dates: October 2 and 3, 2002 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Environmental Contractors of Illinois	8	OFCA Engineered Cover Contractor
Cooling & Sons	4	OFCA Seeding Contractor
Hard Hat Services, Inc.	4	ONCA SBPA Interim Cover Contractor
Area Survey	2	ONCA SBPA Interim Cover Surveyor
Austgen	2	Electrical Contractor

Construction Activities

Major Activities:

- Environmental Contractors of Illinois completed placing the topsoil, seeded the Off-Site Containment Area engineered cover, and demobilized from the site on October 4, 2002.
- Hard Hat Services, Inc. continued installing conveyance piping and pressure testing for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system.
- Area Survey surveyed the trench location for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system.
- Montgomery Watson Harza held the weekly construction coordination meeting.

Activities Performed:

Environmental Contractors of Illinois (ECI) completed placing the topsoil for the Off-Site Containment Area (OFCA) engineered cover. ECI replaced the concrete rings around the OFCA piezometers and extraction well cleanouts. Cooling & Sons, subcontractor to ECI, seeded the OFCA engineered cover on October 3 and 4, 2002. ECI and Cooling & Sons demobilized from the site on October 4, 2002.

Montgomery Watson Harza (MWH) and ECI investigated the damage to OFCA in-situ soil vapor extraction well SVE-38. MWH and ECI removed the bentonite from the well saddle underneath the flexible membrane liner (FML). MWH and ECI observed that the well riser connected at the saddle was bent. MWH induced a vacuum at the well and found that the saddle and well remained intact. ECI replaced the stick-up riser for

the well and placed bentonite around the saddle. Mid-America Lining Company (MAL) is scheduled to return to the site next week to replace the flexible membrane boot around the well.

Hard Hat Services, Inc. (HHSI) continued trenching for the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system. HHSI placed the conveyance piping and backfilled trench runs A and B with the native material. HHSI began trenching through the central portion of the SBPA and encountered several drums. HHSI removed the drums and placed them alongside the trench. HHSI also encountered drums in trench C, immediately south of the ACS employee break room building. Black & Veatch Special Projects Corp. (BVSPC) inquired of MWH whether these areas were consistent with the findings for the site during the RI, or whether a new buried drum area had been encountered. MWH reported that the drums were consistent with previous findings and that it did not consider these areas to be buried drum areas. HHSI trenched through the areas and covered the drum debris with soil to minimize potential vapors. MWH reported that it would have HHSI bury the drum debris on-site in a location under the cap that would not interfere with the ISVE system.

MWH reported that the OFCA ISVE system operated until Tuesday, October 1, 2002. MWH suspected that the system shut down because of a high temperature alarm at the scrubber; however, MWH was unable to confirm this based on the existing control system. MWH had Austgen on-site to upgrade the system so that MWH could track the temperature in the scrubber. MWH was unable to resume operating the OFCA and continued to assess the system faults.

MWH reported that the groundwater treatment plant (GWTP) was operating at 45 gpm. MWH also reported that the heat transfer plates for tank T-2 were being fabricated and are expected to be installed in 3 to 4 weeks.

MWH held the weekly construction coordination meeting on October 3, 2002.

Topics of Concern:

- HHSI encountered drums and debris during trenching activities in the ONCA SBPA.

Concern Resolution:

- MWH reported that the drums and debris encountered were consistent with the findings of the RI and did not believe that a new buried drum debris area had been encountered.

Upcoming Activities:

- MAL to install a replacement FML boot for OFCA ISVE well SVE-38.
- HHSI to continue trenching and installing the SBPA ISVE system piping and begin importing clay.
- MWH to resume operating the OFCA ISVE system.
- BLA to install the ONCA SBPA ISVE system wells.
- Ryan Construction to install heat transfer plates in tank T-2.

Signature: Leigh Peters

Date: October 7, 2002

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WEEKLY CONSTRUCTION MEETING AGENDA
FOR ~~SEPTEMBER 26, 2002~~ MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, ~~September 26, 2002~~ ^{OCT 4th}

MEETING TIME: 10:00 am

MEETING LOCATION: ACS Site – Site Trailer

TOPICS:

Health and Safety Summary (Lee or Tom)

GWTP Status (Lee)

- Current flow rate
- Bio Tank heating system.

Off-Site ISVE System (Tom)

- Restarting unit

Off-Site Final Cover (Todd/ECI)

- Root Zone placement/compaction
- Topsoil/Grass installation
- Schedule for next two weeks.

On-Site Interim Cover (Todd/Rob/Hard Hat)

- Construction Activities – summary
- Subbase preparation
- Piping installation, pressure testing
- Clay placement, compaction
- Schedule for next two weeks.

Groundwater Monitoring Event (Travis/Chad)

- Wells and Private wells sampling

Looking Ahead

Week of...	Task
September 30 OCT 10 th	<ul style="list-style-type: none">• GWTP system operation• Off-Site completion• Hard Hat Services pipe installation, clay placement
October 7	<ul style="list-style-type: none">• GWTP system operation• Hard Hat Services pipe installation, clay placement
Health and Safety Look Ahead	<ul style="list-style-type: none">• On-Site cover work – PPE/Air monitoring/coordination with ACS facility• Vehicle traffic safety

Next Weekly Construction Meeting

- Thursday, October 3, 2002
10

**MWH**

MONTGOMERY WATSON HARZA

By _____ Date _____ Client _____ Sheet _____ of _____
Chkd. By _____ Description _____ Job No. _____

OCT 4TH**Weekly Const MTH.****Fax***

TOM TINICS	MWH	219-924-4561
JODD LEWIS	MWH	630-836-8959
Peter Vajt	MWH	630-836-8959
John McLaughlin	MWH	630-637-9471
Steve Palmer	ELI	815-654-4730
Ligh Peters	BVSL	312-346-4781
Jon Pohl	MWH	630-836-8959
ROB ADAMS	MWH	630-836-8957
LEE OROSZ	MWH	

**WEEKLY CONSTRUCTION MEETING MINUTES
FOR OCTOBER 3, 2002 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: October 3, 2002

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES: Todd Lewis – MWH
Travis Klingforth – MWH (via phone)
Tom Tinics – MWH
Peter Vagt – MWH
Rob Adams – MWH
Lee Orosz – MWH
Jon Pohl – MWH
Chris Daly – MWH (via phone)
Leigh Peters – BVSPC
Steve Palmer – Environmental Contractors of Illinois (ECI)
John McDonough – Hard Hat Services, Inc. (HHSI)

TOPICS:

Health and Safety Summary

No health and safety incidents have occurred since the last construction meeting. While trenching the perimeter pipe trenches for the 3-inch diameter water conveyance pipe, Hard Hat Services, Inc. (HHSI) has been wearing full-face negative pressure respirators and practicing engineering controls including working upwind, performing air monitoring, and using an exclusion zone.

HHSI and MWH have been conducting air monitoring during HHSI's activities. There have been spikes of VOCs, especially immediately after trenching a new section, however the readings have not been sustained and quickly dissipate.

Lee Orosz conducted a health and safety meeting on October 3 with the Cooling Company, the grass seed installation crew scheduled to perform work in the Off-Site Area.

Groundwater Treatment Plant (GWTP) Status

Personnel working for the ACS facility damaged one of the Barrier Wall Extraction System (BWES) lines in the On-Site Area during the week of September 23. ACS personnel completed repairing the line on September 27 and the GWTP is once again

pumping water from the On-Site Area. The GWTP is currently operating normally at 45 gallons per minute (gpm).

MWH has reviewed and approved construction drawings from Omega Products for the heat exchanger to be installed in the activated sludge plant of the GWTP. The unit is expected to arrive in three to four weeks.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

The ISVE system is currently not in operation. Rising temperatures in the scrubber unit continue to trigger the system's safety features resulting in system shut down. MWH is investigating possible solutions to this problem.

Off-Site Area Final Engineered Cover

Environmental Contractors of Illinois (ECI) completed compaction and moisture testing of the placed root zone material on October 1 after additional water was added to the material. ECI completed topsoil placement on October 2. Grass seed and straw were placed on October 3 using hydroseeding methods. ECI completed installation of the gravel access road from the southern gate to the Blower Shed on October 2. In addition, all piezometers and extractions wells in the liner area have been protected by placing concrete rings around them. The surveyors are scheduled to complete a final topographic survey on October 4.

ECI damaged extraction well SVE-38 during soil placement activities on September 24. MWH and ECI have investigated the extent of damage. The above-ground stick-up portion of well has been replaced. A bend remains in the well just above the saddle connecting the conveyance piping to the well. MWH has tested the well and the integrity of the well does not appear to have been compromised. Additional bentonite has been placed around the bend area to further ensure a good seal. The FML liner around the well is scheduled to be repaired by Mid-America Lining on October 9. The well will then be resurveyed to allow water levels to be collected from the well as needed.

On-Site Still Bottoms Pond Area (SBPA) Interim Engineered Cover

Hard Hat Services, Inc. (HHSI) has completed and pressure tested conveyance pipe trenches A and B. HHSI is currently trenching and installing pipe in trench C. HHSI anticipates beginning to import clay material to the Site for placement by October 9. MWH will work with HHSI to coordinate clay compaction testing efforts. The compaction tests will be performed by Great Lakes Soil and Environmental Services.

MWH and HHSI will be field-adjusting the proposed alignment of the southern and eastern pipe trenches to conform to actual field conditions, especially at the locations of buried debris.

On-Site Area ISVE System

Notice to proceed has been given to Boart Longyear & Associates (BLA) for the installation of the ISVE wells in the On-Site Area. BLA has begun sending submittals to MWH for review. BLA's target start date is October 14, depending on HHSI's progress.

BLA is expected to begin work before HHSI has demobilized and install wells in areas where the interim cover has already been completed.

Groundwater Monitoring

On-Site Area piezometer P-39 was damaged by an ACS delivery vehicle. P-39 is not currently monitored as part of the long-term groundwater monitoring plan, however, Lee Orosz of MWH repaired the piezometer on September 23. It will be resurveyed next time Area Survey is on-site.

Looking Ahead

Week of October 7, 2002	<ul style="list-style-type: none">• GWTP operation• HHSI installs and tests piping during installation of On-Site Area Interim Cover• HHSI begins to place imported clay
Week of October 14, 2002	<ul style="list-style-type: none">• GWTP operation• HHSI continues placement of clay• Boart Longyear begins mobilization
Anticipated Health and Safety Items to Watch for	<ul style="list-style-type: none">• On-Site Interim Engineered Cover<ul style="list-style-type: none">• Fencing, communication with ACS facility and ECI• Vehicle Safety/Traffic Control (regrading activities)• Air Monitoring• Generator safety• High pressure testing safety• Trenching safety• Preparation for BLA mobilization

Next Weekly Construction Meeting

- Thursday, October 10, 2002

TMK/PJV/RAA

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Weekly Oversight Summary Report No. 84
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of October 7, 2002

BVSPC O/S Dates: October 9 and 10, 2002 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	4	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Environmental Contractors of Illinois	1	OFCA Engineered Cover Contractor
Mid-America Lining Company	2	OFCA FML Installation Contractor
Hard Hat Services, Inc.	4	ONCA SBPA Interim Cover Contractor
Great Lakes Soil & Environmental Testing	2	ONCA SBPA Compaction Testing Contractor
Austgen	1	Electrical Contractor

Construction Activities

Major Activities:

- Mid-America Lining Company repaired the flexible membrane liner boot at Off-Site Containment Area in-situ soil vapor extraction well SVE-38.
- Environmental Contractors of Illinois replaced the root zone material and top soil around Off-Site Containment Area in-situ soil vapor extraction well SVE-38.
- Hard Hat Services, Inc. completed installing conveyance piping for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system and began placing clay for the interim cover.
- Great Lakes Soil & Environmental Testing began testing the compaction and moisture of the On-Site Containment Area Still Bottoms Pond Area interim cover.
- Montgomery Watson Harza held the weekly construction coordination meeting.

Activities Performed:

Mid-America Lining Company (MAL) returned to the site on October 10, 2002, and replaced the flexible membrane liner (FML) boot on Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) system well SVE-38. Black & Veatch Special Projects Corp. (BVSPC) observed MAL construct a test weld and install the boot. BVSPC also observed MAL perform non-destructive field testing of the

extrusion welds with a vacuum box. Environmental Contractors of Illinois (ECI) replaced the root zone material over the liner after the boot was tested. ECI also replaced topsoil and seeded the area.

Hard Hat Services, Inc. (HHSI) completed trenching and installing the piping for the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) ISVE system. While trenching in the northeast portion of the SBPA, HHSI encountered impacted soils. HHSI wore respirators while working in the area. As HHSI moved west, it encountered an area with drum debris at a depth of 14 inches below the subgrade. MWH decided to place the HDPE conveyance piping at the shallower depth rather than having HHSI continue to excavate into the drum debris. MWH reported that it did not want to continue excavating because it wanted to minimize the exposure of HHSI to the debris and to avoid working in Level B PPE. HHSI reported that it would pressure test the conveyance piping early next week. HHSI backfilled the trenches on the western portion of the SBPA and began placing clay in the western area. HHSI also placed FML in the designated areas such as over the ACS stormwater drain tile.

Great Lakes Soil & Environmental Testing (Great Lakes) was on-site to perform compaction and moisture testing of the first lift of clay on the western portion of the SBPA. The Proctor results for the clay were dry density of 112 pcf and an optimum moisture content of 15%. Preliminary test results indicated that HHSI was meeting the 95% compaction requirement; however, HHSI was not meeting the moisture requirements. HHSI continued discing the clay, adding moisture, and compacting. HHSI began compacting the clay with a sheepsfoot roller and a vibratory smooth drum roller.

MWH reported that Boart-Longyear Associates (BLA) is scheduled to mobilize to the site on October 17, 2002. MWH expects that BLA will begin drilling the ONCA SBPA ISVE wells on October 21, 2002. MWH scheduled a kick-off meeting for BLA on October 17, 2002. BLA will be installing the wells in Level B PPE.

MWH reported that the OFCA ISVE system thermal oxidizer and scrubber remained off-line. MWH reported that the scrubber continued to exceed its temperature limit. Austgen was on-site during the week to investigate the control system and scrubber high temperature fault. MWH reported that it removed the spray nozzle from the primary quench bar in order to help prevent the scrubber from exceeding its temperature limit. MWH began operating the system with the nozzle removed and inadvertently flooded the thermal oxidizer's heat exchanger. MWH operated the thermal oxidizer with ambient air in order to begin removing the moisture from the heat exchanger. MWH reported that it was working with Durr Environmental, Inc. (Durr) in order to obtain the correct nozzle for the primary quench. MWH also reported that it is working with Durr to arrange for a specialized field technician to work on the unit.

MWH reported that the groundwater treatment plant (GWTP) operated normally at 40 gpm. MWH reported that the heat exchanger equipment for tank T-2 is currently being fabricated and will be delivered to the site on October 18, 2002. Ryan Construction is scheduled to install the heat exchanger equipment during the week of October 21, 2002. MWH reported that it will either shut down the GWTP, or bypass tank T-2.

MWH also reported that Austgen will be on-site over the next two weeks installing controls and pumps at MW-10C and MW-56 in order for MWH to begin pumping from these wells. MWH reported that Austgen will trench from the western side of the GWTP to MW-10C, then to MW-56. MWH will have Austgen integrate these wells into the control system.

MWH held the weekly construction coordination meeting on October 10, 2002.

Topics of Concern:

- HHSI encountered drum debris in the northeast portion of perimeter trench C.

Concern Resolution:

- MWH decided to minimize the depth of trench C in the area of debris in order to minimize upgrades to Level B PPE. The conveyance piping placed in this area is at a shallower depth than designed.

Upcoming Activities:

- HHSI to pressure test the conveyance piping and continue placing clay on the OFCA SBPA.
- Great Lakes to continue compaction and moisture testing.
- BLA to mobilize to the site on October 17, 2002, for the ONCA SBPA ISVE well installation.
- MWH to continue repairs to the OFCA ISVE thermal oxidizer and scrubber system.
- Austgen to install pumps and begin integrating MW-10C and MW-56 into the GWTP.
- Ryan Construction to install heat transfer plates in tank T-2.

Signature: Leigh Peters

Date: October 14, 2002

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**WEEKLY CONSTRUCTION MEETING AGENDA
FOR OCTOBER 10, 2002 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: Thursday, ^{October 10}~~September 26~~, 2002

MEETING TIME: 10:00 am

MEETING LOCATION: ACS Site – Site Trailer

TOPICS:

Health and Safety Summary (Lee or Tom)

GWTP Status (Lee)

- Current flow rate
- Bio Tank heating system.

Off-Site ISVE System (Tom)

- Restarting unit

Off-Site Final Cover (Todd/ECI)

- ECI Closeout

On-Site Interim Cover (Todd/Rob/Hard Hat)

- Construction Activities -- summary
- Piping installation, pressure testing
- Clay placement, compaction
- Schedule for next two weeks.

Looking Ahead

Week of...	Task
October 14	<ul style="list-style-type: none">• GWTP system operation• Hard Hat Services pipe installation, clay placement
October 21	<ul style="list-style-type: none">• GWTP system operation• Hard Hat Services pipe installation, clay placement
Health and Safety Look Ahead	<ul style="list-style-type: none">• On-Site cover work – PPE/Air monitoring/coordination with ACS facility• Vehicle traffic safety

Next Weekly Construction Meeting

- Thursday, October 17, 2002

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SIGN IN SHEET
WEEKLY CONSTRUCTION MEETING
OCTOBER 10, 2002

Name	Company	Fax Number
LEE OROSZ	MWH	219-924-4561
Jon Pohl	MWH	630-836-8959
John McDonough	HH SI	630 637-9471
Leigh Peters	BVSPC	312 3164781
BOB ADAMS	MWH	630-836-8959
TRAVIS KLINGFORTH (PHONE)	MWH	630-836-8959
PETE VAGT (PHONE)	MWH	630-836-8959
CHRIS DALY (PHONE)	MWH	630-836-8959
TODD LEWIS (PHONE)	MWH	630-836-8959
KEVIN ADLER (PHONE)	USEPA	
TOM TIVICS	MWH	219-924-4561

**WEEKLY CONSTRUCTION MEETING MINUTES
FOR OCTOBER 10, 2002 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: October 10, 2002

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES: Todd Lewis – MWH (via phone)
Travis Klingforth – MWH (via phone)
Tom Tinics – MWH
Peter Vagt – MWH (via phone)
Rob Adams – MWH
Lee Orosz – MWH
Jon Pohl – MWH
Chris Daly – MWH (via phone)
Kevin Adler – U.S. EPA (via phone)
Leigh Peters – BVSPC
John McDonough – Hard Hat Services, Inc. (HHSI)

TOPICS:

Health and Safety Summary

No health and safety incidents have occurred since the last construction meeting.

Hard Hat Services, Inc. (HHSI) and MWH have been conducting air monitoring during HHSI's activities in the On-Site Area. There have been spikes of volatile organic compound (VOC) readings, however the readings have not been sustained and quickly dissipate. HHSI has been wearing respirators as dictated by the health and safety plan for these conditions.

HHSI has begun importing clay to the On-Site Area. The route for trucks importing clay has been revised at the request of the ACS facility: trucks will enter the work area from the north, unload clay, and exit the work area to the south across the railroad tracks.

Lee Orosz conducted a health and safety meeting on October 9 for Great Lakes Soil and Environmental personnel scheduled to perform compaction and moisture testing in the On-Site Area.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating normally at 40 gallons per minute (gpm).

MWH has reviewed and approved construction drawings from Omega Products for the heat exchanger to be installed as a new component of the activated sludge plant of the GWTP. The unit is scheduled to arrive on October 18.

MWH will be installing a pumping system to purge approximately one gpm from both monitoring well MW-10C and monitoring well MW-56 to the GWTP for treatment. MWH plans to install the electrical and piping lines for the system during the weeks of October 14 and 21. These pumps have been in service previously. This installation is to "winterize" them so they won't have to be shut down later in the year. MWH anticipates beginning to operate the pumping system by the end of October.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

The ISVE system is currently not in operation. Rising temperatures in the scrubber unit during operation continue to trigger the system's safety features resulting in system shut down. MWH is investigating solutions to this problem. MWH is scheduling on-site assistance from the manufacturer, Durr Engineering.

Off-Site Area Final Engineered Cover

Environmental Contractors of Illinois (ECI) completed the Off-Site Area final engineered cover and demobilized on October 4. Repair of damage to extraction well SVE-38 was completed on October 10. The above-ground stick-up portion of well was replaced. A slight bend remains in the well just above the saddle connecting the conveyance piping to the well. MWH has tested the well and the integrity of the well does not appear to have been compromised. Additional bentonite has been placed around the bend area to further ensure a good seal. Mid-America Lining repaired the FML liner around the well on October 10. The well will be resurveyed to allow water levels to be collected from the well as needed. Clay, root zone, topsoil, and grass seed were replaced around the well in accordance with the design.

MWH and ECI have completed the final punchlist items remaining for project completion, including the repositioning of rip rap along the western drainage swale and the repair of SVE-38.

On-Site Still Bottoms Pond Area (SBPA) Interim Engineered Cover

HHSI has continued to place and pressure test conveyance pipe in the On-Site Area. HHSI anticipates completing pipe installation on October 11. HHSI began to import clay material to the Site for placement on October 9. Great Lakes has begun to perform compaction and moisture tests on the soil as it is placed.

Black & Veatch has requested additional confirmation regarding the acceptability of the imported sand bedding being placed in the pipe trenches. MWH will be receiving a certification letter from the sand supplier certifying that the sand is virgin material.

On-Site Area ISVE System

Boart Longyear & Associates' (BLA) target mobilization date for the installation of the ISVE wells in the On-Site Area is October 17. MWH has reviewed and commented upon

submittals from BLA and BLA is currently revising their submittals. A kickoff construction and health and safety meeting is scheduled for 9 am on October 17. BLA anticipates beginning to install wells on October 21.

Looking Ahead

Week of October 14, 2002	<ul style="list-style-type: none"> • GWTP operation • HHSI completes piping installation and testing • HHSI continues to place and test imported clay • BLA begins mobilization
Week of October 21, 2002	<ul style="list-style-type: none"> • GWTP operation • HHSI continues placement of clay • BLA begins drilling wells
Anticipated Health and Safety Items to Watch for	<p>On-Site Interim Engineered Cover</p> <ul style="list-style-type: none"> • Fencing, communication between ACS facility, HHSI, and BLA • Vehicle Safety/Traffic Control (regrading activities) • Air Monitoring • Generator safety • High pressure testing safety • Trenching safety <p>Trenching work for installation of MW-10C and MW-56.</p> <ul style="list-style-type: none"> • Trenching will intersect two underground utility lines (MWH will shut off power prior to trenching) <p>Installation of heat exchanger in GWTP</p> <ul style="list-style-type: none"> • Confined space work by Ryan Construction inside tank T-2 (air monitoring, clean out tank in advance, etc.)

Next Weekly Construction Meeting

- Thursday, October 17, 2002

TMK/RAA/PJV

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Weekly Oversight Summary Report No. 85
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of October 14, 2002

BVSPC O/S Dates: October 15 and 17, 2002 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Hard Hat Services, Inc.	5	ONCA SBPA Interim Cover Contractor
Great Lakes Soil & Environmental Testing	1	ONCA SBPA Compaction Testing Contractor
Boart Longyear Associates	7	ONCA SBPA ISVE Well Driller
Ryan Construction	3	General Contractor
Austgen	3	Electrical Contractor

Construction Activities

Major Activities:

- Hard Hat Services, Inc. continued placing and compacting clay for the On-Site Containment Area Still Bottoms Pond Area interim cover.
- Great Lakes Soil & Environmental Testing tested the compaction and moisture of the On-Site Containment Area Still Bottoms Pond Area interim cover.
- Ryan Construction and Austgen installed piping to connect MW-10C and MW-56 to the groundwater treatment plant.
- Boart Longyear Associates mobilized to the site.
- Montgomery Watson Harza held a Health and Safety Kick-off Meeting for Boart Longyear Associates.
- Montgomery Watson Harza held the weekly construction coordination meeting.

Activities Performed:

Hard Hat Services, Inc. (HHSI) continued placing and compacting clay for the first 6-inch-thick lift of the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) interim cover. Great Lakes Soil & Environmental Testing (Great Lakes) returned to the site and performed compaction and moisture testing of the first lift of clay on the western portion of the SBPA. Montgomery Watson Harza (MWH) reported that the first lift of clay on the western portion of the SBPA met the compaction and moisture requirements.

Austgen and Ryan Construction trenched from the groundwater treatment plant (GWTP) to MW-10C and MW-56. An electrical line and the natural gas line were damaged during trenching activities. MWH had previously de-energized these lines to prevent any health and safety incidents. MWH reenergized the lines after they had been repaired on Monday. Ryan Construction installed piping connecting these wells to the GWTP. Austgen pulled wiring from the GWTP to these wells for the control system. Ryan Construction poured concrete pads at each of the wells for the control panels. MWH reported that it expects to begin pumping 1 gpm from each of these wells by the end of next week.

Boart Longyear Associates (BLA) mobilized to the site on Thursday, October 17, 2002. MWH held a Health and Safety Kick-off Meeting for BLA on the same day. BLA reported that it will have three rigs at the site; two drill rigs and one geoprobe rig. BLA reported that it plans on conducting all of the drilling work in Level B PPE. BLA is expected to begin drilling on October 23, 2002.

MWH reported that the OFCA ISVE system thermal oxidizer and scrubber remained off-line. MWH disassembled the heat exchanger on the thermal oxidizer to investigate any potential damage. MWH showed Black & Veatch Special Projects Corp. the extent of the water that had flooded the unit last week. MWH also began disassembling the combustion chamber on the thermal oxidizer in order to inspect the refractory. Durr Environmental, Inc. is expected to provide a replacement spray nozzle for the primary quench bar. MWH also reported that it is working with Durr to arrange for a specialized field technician to work on the unit.

MWH reported that it is negotiating the thermal oxidizer and scrubber units for the ONCA SBPA in-situ soil vapor extraction (ISVE) system. MWH may install a 2,000 scfm unit and initially use the unit for both the OFCA and ONCA ISVE systems until the existing OFCA unit is repaired.

MWH reported that the GWTP operated normally at 40 gpm except for October 14, 2002, when the plant was shut down for Austgen and Ryan Construction's work. MWH reported that the heat exchanger equipment for tank T-2 is currently being fabricated and will be delivered to the site on October 18, 2002. Ryan Construction is scheduled to install the heat exchanger equipment during the week of October 21, 2002. MWH reported that it will either shut down the GWTP, or bypass tank T-2. MWH will also perform a health and safety update for Ryan Construction for working in the confined space of T-2.

MWH held the weekly construction coordination meeting on October 17, 2002.

Topics of Concern:

- None.

Concern Resolution:

- None.

Upcoming Activities:

- HHSI to complete placing clay.
- Great Lakes to complete compaction and moisture testing.

- BLA to begin drilling the ONCA SBPA ISVE wells on October 23, 2002.
- MWH to continue repairs to the OFCA ISVE thermal oxidizer and scrubber system.
- Austgen to install pumps and begin integrating MW-10C and MW-56 into the GWTP.
- Ryan Construction to install heat transfer plates in tank T-2.

Signature: Leigh Peters

Date: October 14, 2002

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**WEEKLY CONSTRUCTION MEETING AGENDA
FOR OCTOBER 17, 2002 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: Thursday, October 17, 2002

MEETING TIME: 10:00 am

MEETING LOCATION: ACS Site – Site Trailer

TOPICS:

Health and Safety Summary (Lee or Tom)

GWTP Status (Lee)

- Current flow rate
- Bio Tank heating system.

Off-Site ISVE System (Tom)

- Restarting unit

SBPA ISVE Well Installation (Todd/Boart)

- Kickoff Meeting
- Schedule

On-Site Interim Cover (Todd/Rob/Hard Hat)

- Construction Activities – summary
- Piping installation, pressure testing
- Clay placement, compaction
- Schedule for next two weeks.

Looking Ahead

Week of...	Task
October 21	<ul style="list-style-type: none">• GWTP system operation• Hard Hat Services pipe installation, clay placement
October 28	<ul style="list-style-type: none">• GWTP system operation• Hard Hat Services pipe installation, clay placement
Health and Safety Look Ahead	<ul style="list-style-type: none">• On-Site cover work – PPE/Air monitoring/coordination with ACS facility• Vehicle traffic safety

Next Weekly Construction Meeting

- Thursday, October 24, 2002

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WEEKLY CONSTRUCTION MEETING
OCTOBER 17, 2002

Name	Company	Fax Number
ROB ADAMS	MWH	630-836-8959
Leigh Peters	BUSPC	312 68 312 3464781
Jon Pohl	MWH	
Bill Stuckey	Bart Longyear	317-784-2035
John McDonough	HHST	630 637-9771
TODD LEWIS	MWH	630. 836. 8959
Peter VAGT	MWH	630 836-8959
LEE OROSZ	MWH	219-924-4561
TOM TINICKS	MWH	219-924-4561
CHAD SMITH	MWH	630-836-8959

VIA PHONE:

CHRIS DALY.	MWH
TRAVIS KLINGFORTH	MWH
KEVIN ADLER	EPA
MARK TRAVERS	ENVIRON

**WEEKLY CONSTRUCTION MEETING MINUTES
FOR OCTOBER 17, 2002 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: October 17, 2002

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES: Todd Lewis – MWH
Travis Klingforth – MWH (via phone)
Tom Tinics – MWH
Peter Vagt – MWH
Rob Adams – MWH
Lee Orosz – MWH
Jon Pohl – MWH
Chad Smith – MWH
Chris Daly – MWH (via phone)
Kevin Adler – U.S. EPA (via phone)
Mark Travers – Environ (via phone)
Leigh Peters – BVSPC
Bill Stuckey – Boart Longyear & Associates (BLA)
John McDonough – Hard Hat Services, Inc. (HHSI)

TOPICS:

Health and Safety Summary

During clay placement activities in the On-Site Area, Hard Hat Services, Inc. (HHSI) has been managing deliveries of clay. One of the delivery vehicles hit and damaged a portion of the ACS facility fence. The fence is scheduled for repair and MWH and HHSI will be looking for ways to increase the visibility of the fence through flagging or spray paint. HHSI is following up with the truck company dispatcher to have a safety reminder meeting for all of their truck operators working on the site.

HHSI has completed backfilling the pipe trenches, thus ending HHSI's intrusive work. HHSI crew members have now downgraded to wearing Level D personal protective equipment (PPE). HHSI will upgrade PPE, as needed, during Boart Longyear & Associates' (BLA) well installation work.

A kickoff construction and health and safety meeting is scheduled for October 17 at 1 pm for BLA personnel scheduled to install In-Situ Vapor Extraction (ISVE) wells in the On-Site Area.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating normally at 40 gallons per minute (gpm). MWH has reviewed and approved construction drawings from Omega Products for the heat exchanger to be installed as a new component of the activated sludge plant of the GWTP. The unit is scheduled to arrive during the week of October 21.

MWH is installing a pumping system to purge approximately one gpm from both monitoring well MW-10C and monitoring well MW-56 to the GWTP for treatment. MWH installed the electrical and piping lines for the system during the week of October 14. Prior to pipe installation, MWH turned off the underground gas line and two underground power lines in the work area. The utility lines were restored to service after the trenching was done.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

The ISVE system is currently not in operation. Rising temperatures in the scrubber unit during operation continue to trigger the system's safety features resulting in system shut down. MWH is investigating solutions to this problem and conducting additional inspections related to the heat exchanger. MWH is scheduling on-site assistance from the manufacturer, Durr Engineering.

MWH is the process of purchasing a new thermal oxidizer to run the On-Site Area ISVE system. MWH is considering purchasing a larger capacity unit than is required by the On-Site Area ISVE system. This will allow MWH to treat vapor from both the On-Site and Off-Site Area ISVE systems with the new thermal oxidizer and provide back up air treatment to increase the reliability of the ISVE systems.

On-Site Still Bottoms Pond Area (SBPA) Interim Engineered Cover

HHSI has completed installing and surveying all underground conveyance piping in the On-Site Area within their scope. All but one of the pipes have been pressure tested. The final pressure testing is scheduled for October 17 or 18, weather permitting. All pipes tested to date have passed the pressure tests.

HHSI continues to import clay material to the Site for placement. Placement of the first six-inch lift is approximately 80% complete. Rain and wet weather the past few days have slowed progress. Great Lakes Soil & Environmental continues to perform compaction and moisture tests on the clay as it is placed.

HHSI anticipates completing clay placement in five more work days. It will then take two to three work days to place the geotextile and gravel required for the road installation.

One section of conveyance piping approximately 15 feet long was installed at a more shallow depth than designed due to the presence of debris. MWH doesn't anticipate any problems with this placement. The conveyance piping is a complete loop, so in the event of the pipe freezing in this section during the winter, MWH will still be able to operate

the system with all dual-phase extraction wells. The type of pipe installed (HDPE) would not be damaged if freezing should occur.

On-Site Area ISVE System

Boart Longyear & Associates' (BLA) began mobilization for the installation of the ISVE wells in the On-Site Area on October 17. MWH has reviewed and commented upon submittals from BLA and BLA is expected to submit revised documents to MWH by October 21. A kickoff construction and health and safety meeting is scheduled for 1 pm on October 17.

BLA anticipates beginning to install wells on October 23, starting in the west area of the SBPA. The well locations will be surveyed and marked by Area Survey on October 22. The drilling work will be performed in Level B personal protective equipment (PPE) including supplied breathing air.

Looking Ahead

Week of October 21, 2002	<ul style="list-style-type: none"> • GWTP operation • HHSI continues to place and test imported clay • BLA begins drilling wells • Pumping system for MW-10C and MW-56 completed
Week of October 28, 2002	<ul style="list-style-type: none"> • GWTP operation • HHSI completes work and demobilizes • BLA continues drilling wells • Install heat exchanger system in GWTP (Tank T-2)
Anticipated Health and Safety Items to Watch for	<p>On-Site Interim Engineered Cover</p> <ul style="list-style-type: none"> • Communication between ACS facility, HHSI, and BLA • Vehicle Safety/Traffic Control (clay importation) • Air Monitoring (including Level B PPE) • Drilling safety <p>Installation of heat exchanger in GWTP</p> <ul style="list-style-type: none"> • Confined space work by Ryan Construction inside tank T-2 (air monitoring, clean out tank in advance, etc.)

Next Weekly Construction Meeting

- Thursday, October 24, 2002

TMK/TAL/PJV/RAA

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**SBPA ISVE/DPE WELL INSTALLATION
CONSTRUCTION AND HEALTH AND SAFETY
KICK-OFF MEETING AGENDA
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: October 17, 2002

MEETING TIME: 9:00 AM

MEETING LOCATION: ACS Site – Site Trailer

TOPICS:

Project Overview (Todd Lewis/Tom Tinics)

- Purpose
- Contact Names

General Health and Safety (Lee Orosz/Tom Tinics)

- Site Access
- Site-specific hazards
- Heavy Equipment Operation
- Personal Protective Equipment (PPE) – Including Level B Refresher
- Air Monitoring
- Exclusion Zones
- Decontamination Procedures
- Emergency/Contingency Plan
- Underground/Overhead Electrical Service
- Daily Toolbox Safety Meetings
- Weekly Site Safety Meetings (Safety Incentive Program)

Task Overview (Todd Lewis)

- Task Summary
- Walkthrough
- Spoils and IDW Management

Schedule (BLA)

- Start date
- Estimated completion date
- Labor force (estimated numbers)
- Equipment usage

Site Walk (Todd Lewis/Rob Adams)

SIGN IN SHEET

SBPA ISVE/DPE WELL INSTALLATION
CONSTRUCTION AND HEALTH AND SAFETY KICK-OFF MEETING
October 17, 2002

Name	Company	Fax Number
ROB ADAMS	MWH	630-836-8959
Jon Pohl	MWH	
Bill Stucky	Boart Longyear	317-784-2035
Alan Tanner	Boart Longyear	317-784-2035
Chris Harrison	Boart Longyear	317-784-2035
Kevin O'Brien	Boart Longyear	317-784-2035
Tim Valdez	Boart Longyear	317-784-2035
DANIEL HARRISON	Boart Longyear	317-784-2035
Keith Laszewski	Boart Longyear Co.	800-236-4983
Lyle Peters	BVSPC	312-346-4781
Peter Velt	MWH	630-836-8959
TODD LEWIS	MWH	630-836-8959
TOM TIXES	MWH	219-924-4501
LEE OROSZ	MWH	
Chad Smith	MWH	630-836-8959

**SBPA ISVE WELL INSTALLATION
CONSTRUCTION KICKOFF MEETING MINUTES
OCTOBER 17, 2002
AMERICAL CHEMICAL SERVICES NPL SITE**

MEETING DATE: October 17, 2002

MEETING TIME: 1:00 PM

MEETING LOCATION: ACS Site – Site Trailer and ONCA Site

ATTENDEES:

Tom Tinics – MWH
Rob Adams – MWH
Jon Pohl – MWH
Chad Smith – MWH
Todd Lewis – MWH
Peter Vagt – MWH
Lee Orosz – MWH
Chris Daly – MWH (via phone)
Bill Stuckey – Boart Longyear
Alan Thomas – Boart Longyear
Chris Harrison – Boart Longyear
Keith Laszewski – Boart Longyear
Kevin O'Brien – Boart Longyear
Daniel Harrison – Boart Longyear
Tim Valdez – Boart Longyear
Leigh Peters – BVSPC

Project Overview

- Todd Lewis provided background information regarding the ACS Site.
- Site contacts were established. The primary site contact for BLA will be Bill Stuckey. The primary site contact for MWH will be Tom Tinics and the on-site technical constact for MWH will be Chad Smith.

General Health and Safety

- Work will be performed following the BLA, MWH, and ACS health and safety plans (HASP).
- Work hours will be from 7 AM to 4:30 PM Monday through Friday. BLA may work after these hours in the area around the MWH trailer. They will need to lock the gate when leaving.
- All personnel are required to sign in at the on-site groundwater treatment plant (GWTP) each morning. They do not need to sign out.
- Access to the On-Site Area will be through west gate near the GWTP.
- BLA will need to maintain daily communication and coordination with MHW and Hard Hat, since both Hard Hat and BLA will have heavy vehicle traffic operating in the On-Site Area. Any imergency must be immediately communicated to other work crews on Site.
- BLA will begin drilling in the western portion of the On-Site Area, as Hard Hat will be finishing up their work in the eastern portion of the On-Site Area.

- PPE – All work will be conducted in Level B, unless conditions allow for downgrade in accordance with the HASP. Notice of downgrades need to be given to MWH.
- Drum carcasses and other debris may be encountered in some areas near the surface. A mixture of volatile contaminants and non-aqueous phase liquids (NAPLs) of various viscosities may occur at different depths.
- If the drill rigs are operating adjacent to one another they will work within one EZ. If they are operating farther apart, the exclusion zone (EZ) will be set up around each drill rig.
- PID and LEL/O2 meters will be used to monitor the perimeter(s) of exclusion zone(s) and worker breathing zones. BLA is responsible for this air monitoring.
- Underground utilities are not anticipated to be encountered. There may be abandoned water lines, but no live utilities remain in the area.
- Overhead utilities include live pipe racks.
- BLA will conduct daily tailgate safety meetings.
- The route to Munster Community Hospital will be made known to all personnel and a map will be kept in each vehicle.
- MWH will lead a weekly safety incentive program that includes each contractor on site.
- Personnel from the ACS facility will conduct a health and safety orientation specific to plant operations for BLA personnel prior to commencement of drilling.
- Wind direction will be monitored using windsocks. Each drill rig will have a windsock attached to the mast.
- Coring through concrete and gravel drive will be necessary at some locations. BLA will have equipment or a drill bit on site for this purpose.
- There is a newly buried pipe around the perimeter of the drilling area and in the center. MWH will pressurize with low pressure this pipe for notification if it is damaged.
- MWH will provide stakes to show the location for drilling each well.
- Any damage to the clay cover by BLA will be the responsibility of BLA. BLA, MWH, and Hard Hat should jointly inspect the cover prior to BLA mobilizing to agree on the original condition of the cover.

Task Overview

- Cuttings will be placed in a roll-off box provided by MWH. BLA will transport cuttings into the roll-off box at the end of each day. MWH will be responsible for managing the roll-off box after work has been completed.
- Clay surface is freshly placed and clean. Care should be taken to avoid spills or releases to the surface resulting from equipment fueling, lubricating, hydraulic equipment, etc. BLA stated that they would put plastic sheeting under the front of each drill rig to minimize this potential.
- Used PPE will be placed in the roll-off box.

Schedule

- Drilling is scheduled to start October 23, 2002. Weather delays could delay the start date to the following week.
- Drilling is expected to take 3 to 4 weeks. Work is expected to last until late November.
- Each drill rig will have a crew of three people: a driller, a helper, and a standby/observer. Two rigs will operate at a time, with a health and safety manager overseeing activities.
- Hollow-stem auger drill rigs will be utilized for the ISVE and DPE wells. A Geoprobe rig will be brought in to complete the AS wells.

CAD/CAS/RAA/PIV/TAL/RAA

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Weekly Oversight Summary Report No. 86
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of October 21, 2002

BVSPC O/S Dates: October 24 and 25, 2002 (Mr. Gailey)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	4	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Hard Hat Services, Inc.	2	ONCA SBPA Interim Cover Contractor
Great Lakes Soil & Environmental Testing	1	ONCA SBPA Compaction Testing Contractor
Boart Longyear Associates	3	ONCA SBPA ISVE Well Driller
Ryan Construction	1	General Contractor
Area Survey	2	Surveying Contractor
Everest VIT	1	OFCA ISVE System Thermal Oxidizer Inspector

Construction Activities

Major Activities:

- Hard Hat Services, Inc. continued placing and compacting clay for the On-Site Containment Area Still Bottoms Pond Area interim cover.
- Great Lakes Soil & Environmental Testing continued testing the compaction and moisture of the On-Site Containment Area Still Bottoms Pond Area interim cover.
- Area Survey surveyed the locations of the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system wells.
- Montgomery Watson Harza conducted the ACS site safety meeting for Boart Longyear Associates on behalf of ACS.
- Boart Longyear began installing the On-Site Containment Area Still Bottoms Pond Area air sparge wells.
- Everest VIT investigated the condition of the Off-Site Containment Area in-situ soil vapor extraction system thermal oxidizer with a fiber optic camera to assess damage to the unit.
- Montgomery Watson Harza held the weekly construction coordination meeting.

Activities Performed:

Hard Hat Services, Inc. (HHSI) continued to place and compact clay for the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) interim cover. Great Lakes Soil & Environmental Testing (Great Lakes) continued to perform nuclear density testing of the interim clay cover. HHSI is scheduled to begin placing the geotextile fabric and gravel road on the SBPA next week. Area Survey began surveying the elevation of the interim cover and the locations of the ONCA SBPA in-situ soil vapor extraction (ISVE) system wells.

Boart Longyear Associates (BLA) returned to the site on October 24, 2002, and began installing the air sparge points for the ONCA SBPA ISVE system using direct push technology. BLA mobilized with a limited crew and Montgomery Watson Harza (MWH) performed the ACS health and safety training on behalf of ACS personnel. ACS personnel are scheduled to conduct its health and safety training with the entire BLA crew next week prior to starting drilling activities. BLA also performed fit testing and a refresher of Level B PPE.

Everest VIT investigated the Off-Site Containment Area (OFCA) ISVE thermal oxidizer with a fiber optic camera to assess any damage to the unit. Everest VIT reported that the unit appeared to be in good condition; however, some buildup in the system was observed. MWH reported that it expects to resume operating the system in 1 to 2 weeks.

MWH reported that the groundwater treatment plant (GWTP) was operating at 40 gpm, extracting water from both the OFCA and ONCA extraction wells and the perimeter groundwater containment system. MWH reported that the GWTP will be off-line next week while the heat exchanger plates are installed in tank T-2. MWH also reported that the installation of the heat exchanger plates in tank T-2 will require confined space entry and that a permit will be obtained. MWH expects the work to take two to three days.

MWH reported that the results from one of the residential well samples, PW-B, collected last month exceeded the method detection limit for bis-(2-ethylhexylphthalate). MWH reported that it will resample this residential well as soon as possible to confirm this detection.

MWH held the weekly construction coordination meeting on October 24, 2002.

Topics of Concern:

- None.

Concern Resolution:

- None.

Upcoming Activities:

- HHSI to install the geotextile and gravel for the ONCA SBPA road.
- Great Lakes to complete compaction and moisture testing.
- BLA to begin drilling the ONCA SBPA ISVE wells.

- MWH to resume operating OFCA ISVE system thermal oxidizer and scrubber system.
- Austgen to install pumps and begin integrating MW-10C and MW-56 into the GWTP.
- Ryan Construction to install heat transfer plates in tank T-2.
- MWH to resample residential well PW-B.

Signature: Leigh Peters

Date: November 4, 2002

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**WEEKLY CONSTRUCTION MEETING AGENDA
FOR OCTOBER 24, 2002 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: Thursday, October 24, 2002

MEETING TIME: 10:00 am

MEETING LOCATION: ACS Site – Site Trailer

TOPICS:

Health and Safety Summary (Lee or Tom)

GWTP Status (Lee)

- Current flow rate
- Heat exchanger installation.

Off-Site ISVE System (Tom)

- Restarting unit

SBPA ISVE Well Installation (Todd/Boart)

- Mobilization
- Schedule

On-Site Interim Cover (Todd/Rob/Hard Hat)

- Construction Activities – summary
- Clay placement, compaction
- Schedule for next two weeks.

Looking Ahead

Week of...	Task
October 28	<ul style="list-style-type: none"> • GWTP system operation • Hard Hat Services pipe installation, clay placement
November 4	<ul style="list-style-type: none"> • GWTP system operation • Hard Hat Services pipe installation, clay placement
Health and Safety Look Ahead	<ul style="list-style-type: none"> • On-Site cover work – PPE/Air monitoring/coordination with ACS facility • Vehicle traffic safety

Next Weekly Construction Meeting

- Thursday, October 31 2002

SIGN IN SHEET
WEEKLY CONSTRUCTION METING
OCTOBER 24, 2002

Construction Meeting Agenda

ACS NPL Site

**WEEKLY CONSTRUCTION MEETING MINUTES
FOR OCTOBER 24, 2002 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: October 24, 2002

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES: Todd Lewis – MWH
Travis Klingforth – MWH (via phone)
Peter Vagt – MWH (via phone)
Rob Adams – MWH
Jon Pohl – MWH
Kevin Adler – U.S. EPA (via phone)
Mark Travers – Environ (via phone)
Chad Gailey – BVSPC
John McDonough – Hard Hat Services, Inc. (HHSI)

TOPICS:

Health and Safety Summary

No health and safety incidents have occurred on the Site since the last weekly construction meeting on October 17. Hard Hat Services, Inc. (HHSI) continues to import clay and truck delivery traffic has operated smoothly.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating normally at 40 gallons per minute (gpm). The heat exchanger manufactured by Omega Products was delivered to the Site during the week of October 21. It is scheduled to be installed as a new component of the activated sludge plant of the GWTP during the week of October 28. The GWTP will be shut down for two to three days during the week of October 28 so that the heat exchanger can be installed.

MWH is installing a pumping system to purge approximately one gpm from both monitoring well MW-10C and monitoring well MW-56 to the GWTP for treatment. MWH installed the electrical and piping lines for the system during the week of October 14. MWH is currently preparing the control and pumping systems for operation.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

A special service consultant is scheduled to examine the ISVE system's thermal oxidizer on October 24. The system is currently not in operation. The consultant will use a fiber optic scope to videotape the inside of the thermal oxidizer to assess the integrity of the

unit. MWH has also determined the oxidizer unit contained water at one time, which may have inhibited proper operation. The moisture can be removed by operating the unit at lower than normal temperatures for a short period of time. MWH expects to reassemble and restart the thermal oxidizer during the week of October 28.

MWH expects to place the order in the next two weeks for a new thermal oxidizer from Global Technologies/Anguill Environmental Systems to run the On-Site Area ISVE system. The delivery time is 14 to 16 weeks after the order is placed, so MWH expects the unit to arrive in early February. MWH is considering purchasing a larger capacity unit (2,000 cubic feet per minute flow). This will allow MWH to treat vapor from both the On-Site and Off-Site Area ISVE systems with the new thermal oxidizer and provide back up air treatment to increase the reliability of the ISVE systems. The extra capacity will also allow for greater volatile organic compound (VOC) treatment and expansion in the future.

On-Site Still Bottoms Pond Area (SBPA) Interim Engineered Cover

HHSI completed pressure testing the final underground conveyance piping in the On-Site Area within their scope on October 17. All pipes tested have passed the pressure tests.

HHSI continues to import clay material to the Site for placement. Placement and testing of the first six-inch lift was completed on October 22. Placement of the second six-inch lift is expected to be completed by October 24. Great Lakes Soil & Environmental continues to perform compaction and moisture tests on the clay as it is placed. HHSI expects to have all compaction testing completed on October 25, depending on weather.

Area Survey began surveying the top of clay contours on October 24 for areas where both six-lifts of clay have already been installed and tested.

HHSI anticipates completing the geotextile and gravel placement required for the road installation during the week of October 28. HHSI will then demobilize from the Site.

On-Site Area ISVE System

Boart Longyear & Associates (BLA) began partial-mobilization for the installation of the ISVE wells in the On-Site Area on October 17. A kickoff construction meeting was conducted October 17 with MWH and BLA. Additional mobilization was conducted on October 24. In addition, a health and safety summary meeting including review of Level B personal protective equipment (PPE) was conducted on October 24 for BLA personnel scheduled to install In-Situ Vapor Extraction (ISVE) wells.

MWH has reviewed and approved submittals from BLA. Area Survey documented in well locations for BLA on October 24. BLA began installation of the six air sparge wells to be placed in the On-Site Area on October 24. The drilling work is being performed in Level B personal protective equipment (PPE) including supplied breathing air. Soil cuttings will be placed in hazardous waste roll-off boxes and covered.

BLA expects to begin installation of the 21 dual-phase extraction wells on October 28. BLA anticipates completing all well installation work in four weeks.

The well installation plan called for six-inches of sand to be placed above the well screen of each well. MWH has increased the sand thickness to 12-inches in order to reduce the chance of any bentonite grout (which is installed above the sand layer) to seep down into the well screen.

Looking Ahead

Week of October 28, 2002	<ul style="list-style-type: none"> • GWTP operation • Reassemble and restart ISVE thermal oxidizer • HHSI completes road installation and demobilizes • BLA continues drilling wells • Install heat exchanger system in GWTP (Tank T-2)
Week of November 4, 2002	<ul style="list-style-type: none"> • GWTP operation • BLA continues drilling wells
Anticipated Health and Safety Items to Watch for	<p>On-Site Interim Engineered Cover</p> <ul style="list-style-type: none"> • Communication between ACS facility, HHSI, and BLA • Vehicle Safety/Traffic Control (clay importation) <p>On-Site ISVE Well Installation</p> <ul style="list-style-type: none"> • Drilling safety, including potential of debris just below ground surface • Air Monitoring (including Level B PPE) including potentially explosive conditions <p>Installation of heat exchanger in GWTP</p> <ul style="list-style-type: none"> • Confined space work by Ryan Construction inside tank T-2 (air monitoring, clean out tank in advance, etc.)

Next Weekly Construction Meeting

- Thursday, October 31, 2002

TMK/TAL/PJV/RAA

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Weekly Oversight Summary Report No. 87
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of October 28, 2002

BVSPC O/S Dates: October 29 and 31, 2002 (Ms. Clark)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	4	Respondent's General Contractor
Indiana Department of Environmental Management	1	
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Hard Hat Services, Inc.	2	ONCA SBPA Interim Cover Contractor
Boart Longyear Associates	6	ONCA SBPA ISVE Well Driller
Ryan Construction	2	General Contractor
Area Survey	2	Surveying Contractor
Austgen	3	Electrical Contractor

Construction Activities

Major Activities:

- Hard Hat Services, Inc. received the geotextile for the road to be installed next week on the On-Site Containment Area interim cover.
- Great Lakes Soil & Environmental Testing completed testing the compaction and moisture of the On-Site Containment Area Still Bottoms Pond Area interim cover.
- ACS conducted its site safety meeting for Boart Longyear Associates' personnel.
- Boart Longyear Associates began installing the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system wells.
- Montgomery Watson Harza began cleaning out tank T-2 in preparation for the installation of heat exchanger plates.
- Montgomery Watson Harza resampled residential well PW-B.
- Montgomery Watson Harza held the weekly construction coordination meeting.

Activities Performed:

Hard Hat Services, Inc. (HHSI) received the geotextile for the construction of the gravel road on the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) interim cover. Because of adverse

weather conditions, HHSI was unable to construct the road during this week and postponed its construction to the week of November 4, 2002. HHSI reported that it met the compaction and moisture requirements for the interim cover. Area Survey performed a locate of the perimeter conveyance piping installed in the SBPA.

Boart Longyear Associates (BLA) mobilized its entire crew to the site this week and received the ACS site specific health and safety training prior to commencing drilling activities. BLA completed installing all six of the air sparge wells on Monday, October 28, 2002. Black & Veatch Special Projects Corp. (BVSPC) observed BLA install ONCA SVE wells SVE-44 and SVE-51 on October 29, 2002. BLA performed air monitoring during the drilling activities with a photoionization detector (PID). BLA reported that the air monitoring results at the cuttings ranged from 13 to 400 ppm, while the air monitoring results at the perimeter of the exclusion zone were less than 1 ppm. BLA decontaminated its equipment at each boring location and drummed the decontamination water for future disposal at the groundwater treatment plant (GWTP). BLA also wrapped cuttings from the drilling in plastic and placed them in a lined and tarped rolloff for future disposal. BLA expects to complete drilling activities in two weeks.

Montgomery Watson Harza (MWH) reported that it revised the drilling activities in the ONCA SBPA to eliminate the requirement for split spoon sampling to ensure that the dual phase extraction wells do not extend into the clay layer. Instead, MWH decided that it would be more efficient to sample using the geoprobe at approximately every other well along the perimeter of the ONCA SBPA interim cover to determine the depth to clay, in addition to sampling at the air sparge points. MWH also reported that it will pressurized the perimeter conveyance piping to 10 psi during drilling in order to alert BLA if the pipe is damaged during drilling activities.

MWH reported that it revised the yard piping details for the ONCA SBPA ISVE system. MWH reported that the only change from the approved design in the 100% Final Remedial Design Report is that the yard piping will be placed on top of the interim clay cover, not within it. MWH reported that the revised design details will be submitted to the Agencies. MWH also reported that it is finalizing the design for the ONCA SBPA ISVE system blower shed.

MWH reported that water remains in the Off-Site Containment Area (OFCA) ISVE system thermal oxidizer and scrubber. MWH plans to operate the system at a lower temperature to remove the water and expects to resume full operation of the unit next week.

MWH ceased operating the GWTP on Monday, October 28, 2002, in order to clean out tank T-2, clean the sand filter, and change the demister. BVSPC asked Tom Tinics of MWH on October 29, 2002, whether MWH had obtained a confined space permit for the cleaning of tank T-2. Mr. Tinics reported that a confined space entry permit was not necessary because a large opening had been cut in the side of the tank, creating two openings in the tank. Mr. Tinics reported that this additional opening disqualified the tank as a confined space. Later in the afternoon of October 28, 2002, BVSPC observed Lee Orosz of MWH cleaning tank T-2 from inside the tank. During the weekly construction coordination meeting on October 31, 2002, BVSPC again questioned MWH about the permit requirements for the work in tank T-2. Mr. Orosz reported that tank T-2 remained a confined space and that MWH had measured the O₂ levels in the tank. Mr. Orosz proceeded to report that MWH ventilated the tank and sprayed water on

the sludge in the tank to minimize the potential fumes prior to personnel entering the tank. Mr. Orosz reported that a confined space entry permit had been obtained for the cleaning of the tank. Mr. Orosz also reported that BVSPC was misinformed on October 29, 2002, regarding the status of the tank and the permit requirements. MWH reported that tank T-2 was not a confined space after the sludge had been cleaned out this week. MWH reported that the heat exchanger plates will be installed in the tank next week.

MWH reported that the electrical boxes and controllers for wells MW-56 and MW-10C had been installed and that the wells are expected to be on-line next week. Austgen completed connecting the controls for the wells into the GWTP programmable logic controller.

MWH reported that it resampled residential well PW-B this week. MWH resampled this residential wells because bis-(2-ethylhexylphthalate) was detected in the original sample.

MWH held the weekly construction coordination meeting on October 31, 2002.

Topics of Concern:

- MWH conveyed incorrect information regarding whether the work in tank T-2 required a confined space entry permit.

Concern Resolution:

- MWH resolved the discrepancy in the communications and reported that it had obtained a permit for working within the confined space.

Upcoming Activities:

- HHSI to install the geotextile and gravel for the ONCA SBPA road.
- BLA to continue drilling the ONCA SBPA ISVE wells.
- MWH to resume operating OFCA ISVE thermal oxidizer and scrubber system.
- Austgen to install pumps and begin integrating MW-10C and MW-56 into the GWTP.
- Ryan Construction to install heat transfer plates in tank T-2.

Signature: Leigh Peters

Date: November 4, 2002

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**WEEKLY CONSTRUCTION MEETING AGENDA
FOR OCTOBER 31, 2002 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: Thursday, October 31, 2002

MEETING TIME: 10:00 am

MEETING LOCATION: ACS Site – Site Trailer

TOPICS:

Health and Safety Summary (Lee or Tom)

GWTP Status (Lee)

- Current flow rate
- Heat exchanger installation.

Off-Site ISVE System (Tom)

- Restarting unit

SBPA ISVE Well Installation (Todd/Boart)

- Status
- Look head schedule

On-Site Interim Cover (Todd/Rob/Hard Hat)

- Construction Activities – summary
- Road installation
- Demobilization

Looking Ahead

Week of...	Task
November 4	<ul style="list-style-type: none">• GWTP system operation• SBPA ISVE well installation• Hard Hat Services road installation
November 11	<ul style="list-style-type: none">• GWTP system operation• SBPA ISVE well installation
Health and Safety Look Ahead	<ul style="list-style-type: none">• On-Site cover work – PPE/Air monitoring/coordination with ACS facility• Drilling activities

Next Weekly Construction Meeting

- Thursday, November 7, 2002

**WEEKLY CONSTRUCTION MEETING MINUTES
FOR OCTOBER 31, 2002 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: October 31, 2002

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES: Todd Lewis – MWH (via phone)
Peter Vagt – MWH
Rob Adams – MWH
Lee Orosz – MWH
Chad Smith – MWH
Jon Pohl – MWH (via phone)
Chris Daly – MWH (via phone)
Kevin Adler – U.S. EPA (via phone)
Mark Travers – Environ (via phone)
Prabhakar Kasarabada – IDEM
Margaret Clark – BVSPC
John McDonough – Hard Hat Services, Inc. (HHSD)
Daniel Harrison – Boart Longyear
William Stuckey – Boart Longyear

TOPICS:

Health and Safety Summary

No health and safety incidents have occurred on the Site since the last weekly construction meeting on October 24. Hard Hat Services, Inc. (HHSD) has completed clay placement. Boart Longyear & Associates (BLA) has begun installing the wells in the Still Bottoms Pond Area (SBPA) for the On-Site In-Situ Vapor Extraction (ISVE) System. Air monitoring results in the breathing zones during well installation have ranged from 13 to 340 parts per million (ppm) while there have been no detections of VOCs at the perimeter of the work zone. A permit-required confined space entry was performed at tank T-2 of the groundwater treatment system to clean out the tank.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating at 15 gallons per minute (gpm). The entire system was shut down October 28 in order to remove sludge from tank T-2 and perform other routine maintenance. The sludge was removed to allow for installation of the heat exchanger in the tank. The heat exchanger will be in place the week of November 4. The GWTP flow rate is expected to be increased back to maximum capacity on November 4 or 5. The equipment for monitoring wells MW-10C and MW-56 is being installed. The wells are

ready for operation except for the installation of float switches to control the operation of the pumps.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

A fiber-optic video inspection was performed on the Off-Site Area Thermal Oxidizer unit the week of October 21. No cracks or unexpected damage were noted. The unit is currently operating in fresh air hot idle mode to dry the unit before bringing it back online. It is estimated that it will take two additional days to dry the unit. It is anticipated that the ISVE system will be brought back online by November 7.

On-Site Still Bottoms Pond Area (SBPA) Interim Engineered Cover

HHSI has completed installation of the interim clay cover and passed all compaction tests. Area Survey is documenting the top of clay elevations. They are also marking in the field the extents of the access road to be constructed. Geotextile fabric for the access road and catch basins was delivered to the site on October 31. Construction of the access road will commence on November 4. HHSI anticipates two to three days of work to complete the interim cover. MWH and HHSI will perform a site walk to identify remaining items needing completion.

On-Site Area ISVE System

BLA has completed the installation of six air sparge wells and seven soil vapor extraction wells. BLA has also completed soil characterization at the site that included collecting samples from the bottom of the screen interval of the perimeter dual-phase extraction wells. These samples were used to characterize the stratigraphy of the site soils to assist in selecting total depth for each well. It was determined that the buried conveyance piping that encircles the site will be supplied with air at 10 psi in order to alert BLA and MWH if this pipe is damaged during the well installation. Barring delays due to weather, BLA estimates that they will complete the well installation in about two weeks.

The yard piping design has been finalized and will be distributed October 31 or November 1. The yard piping will be placed on top of the clay and not in the clay, which is a variance from the original design in the Final Remedy. The long lead items, namely the well saddles, have been ordered. The yard pipe installation is anticipated to begin in two to three weeks.

Looking Ahead

Week of November 4, 2002	<ul style="list-style-type: none">• GWTP at normal operation• Off-Site ISVE start up• HHSI completes road installation and demobilizes• BLA continues drilling wells
Week of November 11, 2002	<ul style="list-style-type: none">• GWTP operation• BLA continues drilling wells
Health and Safety Items to Monitor	<p>On-Site Interim Engineered Cover</p> <ul style="list-style-type: none">• Communication between ACS facility, HHSI, and BLA• Vehicle Safety/Traffic Control (road construction, stone importing) <p>On-Site ISVE Well Installation</p> <ul style="list-style-type: none">• Drilling safety, including potential of debris just below ground surface• Air Monitoring (including Level B PPE) including potentially explosive conditions• Establishing and maintaining exclusion zones

Next Weekly Construction Meeting

- Thursday, November 7, 2002

JDP/RAA/PJV/TAL/TMK

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(28)

9/26/02

J. E. Peters

- 1310 Roll 29 Photo 10 facing northwest of P39
- 1220 - 1250 lunch
- 1300 - 1325 Spoke with LMC and updated on site activities.
- 1330 Roll 29 Photo 11 facing south west of ONCA
ISVE piping stickup for blower shed
- Roll 29 Photo 12 facing west of trench with
sand bags over piping for testing
- 1345 Roll 29 Photo 13 facing S at ground of protut
from buried drum that was splattered during rain
last Thursday. PID reading in void was 27 ppm.
no elevated readings in breathing zone.
- 1350 Roll 29 Photo 14 facing southwest of debris
removed from trenching ONCA.
- 1400 observed HHSI pressure test lines started
with #19, pressurized to 90 psi for 15
min. Threaded cap at end of piping - loss
of 0.5 psi total.
- 1435 Roll 29 Photo 15 facing east of HHSI pressure
testing line 7
- 1450 Roll 29 Photo 16 facing north of ECI discharging
pot zone material.
- 1500 left site for day

~~J. E. Peters~~
9/26/02

10/2/02

J. E. Peters

(29)

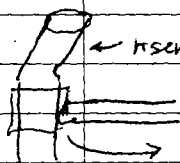
- 0710 Arrive on-site, 70°F, P. Cloudy. light rain, SW
wind. MWH not onsite to open gates. HHSI
and ECI personnel at site waiting. Review
review of documents.
- 0730 MWH on-site - Personnel Onsite:
- | | |
|-------------------|-------|
| Tom Tines | MWH |
| Steven Lloyd | ECI |
| Mike McLean | ECI |
| Bob Page | ECI |
| Steve Palmer | ECI |
| Mike Petrich | HHSI |
| Tyrene McCollough | HHSI |
| Terrance Jones | HHSI |
| Lenny Peters | BVSPL |
- 0740 Spoke with T. Tines. Activities for today:
- ONCA SBPA ISVE piping + pressure test
 - ONCA topsoil + road
- T. Tines reported that the ISVE system
went down on Monday evening - MWH suspects
scrubber temp exceeded. MWH inspected
nozzles yesterday and shut system down.
MWH and ECI inspected SVE-BB, removed
boot, observed vapor was vent - riser
pipe connected to screen. MWH pulled
vacuum on it from blower shed and did

~~J. E. Peters~~

(30)

10/2/02 Jeff Epstein

not observe leak at saddle. Back-filled



with bentonite and added 5 feet of riser. MAC to be onsite

on Sunday to replace boot for liner. MWH will then place root zone material + topsoil.

HHSI pressure tested 8-in ϕ HDPE lines yesterday but gas leak failed at 80 psi.

HHSI to retest 8 in ϕ lines at 50 psi for 30 minutes instead (per. Rob Adams).

0817 Roll 29 Photo 17 facing NW of grate tile and minimal gravel over future road.

0820 S. Palmer reported gravel to come on site today to finish road. ECI expects to have topsoil placed and finish anchor trench today. Passed compaction and moisture yesterday for root zone material. To hydroseed Thurs + Fri weather permitting.

0825 Roll 29 Photos 18 + 19 facing west of SVE-38 replacement riser and liner that boot needs to be replaced.

0845 Roll 29 Photo 20 facing SW of P114 + material removed for concrete ring

0910 Roll 29 photo 21 facing E of 8-in sticky
Jeff Epstein

(31)

10/2/02

Jeff Epstein

for blowershed and HHSI excavating

0912 Roll 29 Photo 22 ^{23 TP} facing SW of trench and product from buried drums

Roll 29 Photo 22 facing north of drums removed from trench

0915 HHSI reported 0.2 ppm PID readings upwind from trench. PID readings spiked at 50 ppm downwind 10-feet from removed drums, and sustained readings of 6-7 ppm at 10 ft downwind. HHSI operator wearing half face respirator. HHSI to place bedding prior to laying pipe. Observed HHSI trench with boot for penetrator pipe.

0955 HHSI pressure testing line 13 at 50 psi for 30 minutes. HHSI asked for variance to test because flange wouldn't hold pressure and gaskets didn't hold.

1030 Reviewed overnight reports.

1120 Went to OEPA. Observed ECI grade site and continue to fill anchor trenches. ECI received some gravel for road. ECI grading site and removing grade stakes

1155 Roll 29 Photo 24 facing southeast of ECI receiving gravel for road to blowershed.

1200 - 1245 Off site for lunch

Jeff Epstein

(32)

10/2/02

J. Peters

1250-1310 Spoke w/ L. Campbell re site activities.

To address new drums on ONCA - need
to explore removal? Also discuss with
MNH modifications to requirements

1230 Roll 29 Photo 25 facing northeast of HHSI
trenching through void area and encountering
drums.

1333 Roll 29 Photo 26 facing SE of drums
removed from center trench

1335 Roll 29 Photo 27 facing E of bobcat
trencher removing drums near perimeter
trench where void areas located.

1340 Roll 30 Photo 1 facing N of HHSI removing
drum from trench.

1400 Spoke with T. Tinius regarding drums. We
called P. Vagt and Todd Lewis + discussed.
P. Vagt + T. Lewis to be on-site tomorrow
to investigate. P. Vagt reported test pits
conducted in area, knew of some drums,
to assess tomorrow. May overpack in fact
drums, MNH does not believe cache of
drums

1426 Went to ONCA with T. Tinius

1430 Roll 30 Photo 2 facing E of drums +
product in trench

(33)

10/2/02

J. Peters

T. Tinius reported HHSI will need to cover
with soil. L. Peters asked MNH if they would
have HHSI monitor air in ACS brick bldg.
HHSI to relocate drums away from building
and cover product with soil. HHSI reported
peak reading in bobcat of 1505 ppm and
an average of 23 ppm.

1445 Spoke with L. Campbell and updated regarding
drums and MNH to investigate tomorrow.

1500 Observed HHSI load sand into trenches where
drums were excavated and free product
present.

1510 Roll 30 Photo 3 facing south of HHSI covering
excavated drums with sand.

1525 Roll 30 Photo 4 facing E showing trench
covered up and drums relocated.
HHSI covered areas with sand.

1540 Left site for day

J. Peters
10/2/02

(34)

10/3/02

Jeff Peters

0710 Arrive on-site, overcast, 70°F light drizzle

wind from north

Personnel On-site -

* Lee Dross MWH

Mike Petrich HHSI

Bob Page ECI

* Steve Palmer ECI

Steven Lloyd ECI

Mike Medeiros ECI

Dan Petrich HHSI

Tyron McCullough HHSI

Terrence Jones HHSI

* Leigh Peters BVSPC.

Activities Today:

① HHSI to place conveyance pipe and trench.

② ECI to place concrete rings - seed.

Lee Dross reported FWTP at 42 gpm.

0730 Went to OFCA, ECI reported Seeding Company to be on-site today & tomorrow (weather permitting) and will place rings today. ECI to demobilize trailer today.

0750 Observed HHSI install HDPE piping and begin backfilling trenches. HHSI surveyors on-site to survey trench locations.

Jeff Peters

(35)

10/3/02

Jeff Peters

0755 Roll 30 Photo 5 facing east of HHSI placing backfill in trench A. Note foreground trench filled yesterday and compacted with wackerpacker.

0830 T. Timms, T. Lewis and Rich from Austagen investigating sampler temperature controls for OFCA ISVE system.

0845 Roll 30 Photo 6 facing north showing scrubber temperature probe and precipitation.

0900 On OFCA near drum area. HHSI to trench some test pits to see what debris is buried below this morning. MWH to avoid drum area or modify trench depth. Will determine when excavating. Observed HHSI backfill trench A with on-site materials.

0945 Went to OFCA. ECI reported concrete rings over plowmeters. Seeding contractor on-site to fertilize and prep surface.

1000 Weekly Construction Meeting - Attendees (X on grav bus) plus:

Peter Vagt MWH

Chris Daly MWH (via phone)

Todd Lewis MWH

Theresa Klinghardt MWH (via phone)

John Pohl MWH

Rob Adams MWH

John McDonough HHSI

(36)

J. P. Pelt

10/3/02

HHS: no incidents. HHSI using full face respirators when trenching L. Orozco held HHS mtg with seeders.

SWP: DP at 45 gpm, Heat exchanger to be fabricated, installed 3-4 weeks.

OFA ISV: Thermox off-line. MNH investigating scrubber thermocouple and upgrading control parameters to be on-line shortly.

OFA: ECI demands tomorrow. Cooling + Sun on-site seeding Thurs + Fri. SVK-38 to be repaired with least either Fri or Sun. MNH prove out saddle and ECI cut vixer - to be resurveyed.

DNCA: HHSI laying pipe and trenching trenches. backfilling Trenches A+B. HHSI to start bringing clay next week. MNH reported on drum debris - consistent with fill, not drum burial. MNH to avoid area + install pipe. BU preparing submittals.

P39: repaired by MNH - to be resurveyed.

MNH order checked caps for OFA piezometers

1050 Mtg conclude - Next mtg 10/10/02 @ 1000

1100 Spoke with R Adams regarding modifications. R Adams reported MNH building subs to performance standards for work, not necessarily MNH specs that are likely more restrictive. MNH requested documentation from ECI

J. P. Pelt

(37)

J. P. Pelt

10/3/02

for modifications to root zone material

1120 Went to DNCA, observed HHS excavated trench past employee break building. Spoke with L. Campbell regarding site activities, drum debris activities and R Adams response to field modifications.

1200 - 1245 lunch

1300 Observed HHSI fuse piping and trench through concrete slab.

1315 Roll 30 Photo 7 facing E of HHSI breaking concrete slab for trench.

1330 went to OFA + observed accepting topsoil for feathered A seed.

1405 Roll 30 Photo 8 facing west of seeding and topsoil at blowershed.

Observed MNH inspect OFA cover. MNH noted west portion of anchor trench near cleanout for SW12 was a location where shale located immediately next to barrier wall.

1450 Roll 30 Photo 9 facing W of C trench near ACS employee break building.

1500 Observed MNH insert 2nd nozzle in primary trench bar for scrubber.

1510 left site for day

J. P. Pelt

(38)

10/9/02

Jeff Peters

0715

Arrive on-site, 50°F, partly cloudy, SE light wind

Personnel on-site:

Lee Orosz MPH

Dan Petrich

~~HHSI~~ HHSI "

Mike Petrich

~~HHSI~~ HHSI

Terrence Jones

HHSI

Tyron McCullough HHSI

Doug Drinnan Kellogg

Lough Peters BVSPC

Activities today - HHSI continue laying piping - bring in clay for ONCA cover

0740

Spoke with L Orosz + Dan Petrich. HHSI

installed & pressure tested western half

of C trench. Remainder of trenches

complete and tested. HHSI to continue

trenching activities and begin placing clay.

HHSI reported elevated PID readings while

trenching - operators and laborers required

to wear respirator during trenching. Traffic

flow for trucks - in through south gate, to

tip and circle to north gate near MWH

trailer for exit. HHSI + MPH requiring

high visibility vests and beacons inside

fence line. HHSI to bury drum and

concrete drums under cap today.

Jeff Peters

(39)

10/9/02

Jeff Peters

0755

Roll 30 Photo 10 facing west of debris removed from trenching and HHSI excavating area in which to bury drums

0800

Roll 30 Photo 11 facing southwest of HHSI burying drum debris

0830

Continued to observe HHSI grade site and bury drum debris.

0850

Spoke with Dan Petrich - HHSI reported storm drain tile snalled up - HHSI trying to power drain tile and expect to place ENIL over tile today. L Peters observed odor at fence line. D. Petrich reported PID readings at Uppon average with spike of 0.7 ppm.

0900

Roll 30 Photo 12 facing west of HHSI removing dirt from around drum tile. HHSI encountered black, oily product under tile in soil.

0915

Observed HHSI cut branches for takes to SVE rolls on south portion of trench C. HHSI rolling subgrade for clay placement

0935

Roll 30 Photo 13 facing northwest of clay and HHSI tension welding HDPE convergence pipe

1000

HHSI bringing 40 loads of clay. HHSI reported Great Lakes to be on site tomorrow for testing. HHSI collected sample for Arctor

Jeff Peters

(40)

10/9/02

Jeff Peters

- HHSI reported optimum moisture content is 15%. HHSI compacting subgrade.
- 1030 Roll 30 Photo 14 facing east of HHSI backfilling trench C note tracer wire and sand bedding.
- 1045 Roll 30 Photo 15 facing N of HHSI says HDPE w/tee for SVE well in trench C
- 1055 T. Timics reported Great Lakes to be onsite at 1300 today - MWH to have proctor results faxed on-site. MWH does not know when MAL to be on-site to repair OFCA FML at SVE-38.
- 1115 Went to OFCA - MWH replaced piezometer caps with caps that are chained to piezometer so that they are not lost in future
- 1125 Roll 30 Photo 16 facing N of OFCA
- 1150 - 1220 Lunch
- 1220 Review of MWH reports
- 1300 Spoke with T. Timics + J. Pohl - Proctor for clay - max density 112.0 pcf, OMC 15% Thermox not running - system flooded - MWH removed nozzle from spray bar. Water flooded system to heat exchanger. MWH operating to remove water and is in contact with Dave. Spoke with J. Pohl

Jeff Peters

(41)

10/9/02

Jeff Peters

- regarding chemical analysis of sand bedding per ONCAs BPA RFB. J. Pohl to look into + talk with HHSI. MWH reported FCL and MAL to be onsite tomorrow to repair SVE 38
- 1335 - 1350 Spoke w/ L Campbell - ADVIS Sand sampling at meeting tomorrow - MWH inconsistency with specs - RIM, ONCA sand, OFCA cover testing frequency, Pressure test 3-inch, FML
- 1400 Spoke w/ Timics regarding thermox
- 1425 Went to ONCA HHSI trenching near NE portion of site - observed strong odor similar to paint thinner - operator + laborer wearing respirators and PID in cab of backhoe.
- 1435 HHSI reported that it was too wet of optimum on initial tests on clay - will disc and rework Great Lakes to return tomorrow. Observed HHSI disc and water clay. HHSI reversed traffic flow. PCS expressed concern over loaded truck crossing tracks
- 150 left site for day

Jeff Peters
10/9/02

(42)

10/10/02

J. G. E. E. E.

0710

Arrive onsite. Sunny, 53°F, light SE wind

Personnel Present:

Lee Drosz MWH

Steve Palmer ECI

Greg Parrott MML

Crispin Sanchez MML

Don Petrich HHSI

Darryl Drinnan HHSI

* Leigh Peters BVSRC

0720

Observed MAL prepare to place boot for SVE-3B. MAL performed test weld and held tested seam.

0750

Roll 30 Photo 17 facing SW at MAL fitting horizontal boot around well SVE-3B.

0805

MAL reported that the line seams passed the field testing.

0825

Roll 30 Photo 18 facing SW at ground at MAL extrusion welding boot.

0843

Roll 30 Photo 19 facing SW at MAL testing seams - non destructive vacuum box.

0815

Observed MAL install clamp around vertical portion of boot and seal with caulk.

0900

Observed SCI replace soil material, backfill around well.

0920

Roll 30 Photo 20 facing west at finish.

J. G. E. E. E.

(43)

10/10/02

J. G. E. E. E.

grading around SVE-3B

0935

Observed activities on DNCA - HHSI placing clay. HHSI damaged ACS piping while trenching possible condensate piping for ACS boilers. Location of pipes not provided by ACS on utility diagrams. MWH to work with ACS on repairs. Great Lakes to test clay today.

1000

Weekly Construction Coordination meeting.

Attendees: * as previous plus:

John Pohl MWH Rob Adams MWH

Tom Tines MWH

John MacDonough HHSI

via phone:

P. Vast MWH Kevin Adler USEPA

T. Lewis MWH Chris Daly MWH

Thavis Kingworth MWH

HHSI no incidents, elevated readings on DNCA, HHSI wearing respirators. MWH monitoring perimeter - observed spikes of 1.5 to 3 ppm. EWR operating at 40 gpm, heat exchanger to be delivered 10/21/02 - Ryan Construction to install. MWH investigating shut down on bypass of tank T-2.

OFCALBVE: thermox off-line, MWH including scrubber high temperature.

J. G. E. E. E.

(44)

10/10/02

Jeff E. R. M.

working with Durr to arrange for person on-site to work on system. Durr to supply new primary french nozzle.

OFCA/Leven: ECL + MAL repaired SVE3B today.

ONCA: HHSI to finish piping tomorrow - encountered more drum debris at shallow depth, to investigate re routing piping or terminating. HHSI to continue with clay and testing. HHSI requested certification letter for clean sand from quarry. BLA to mob 10/17. HHSI mtg on 10/17 - tentative. BLA to drill 10/20. MWH submitting corrections to BLA for revision.

LOOK Ahead: MWH to trench to MW106 and MW108 to integrate pumping system at each well to BWTP. to take 2 weeks. BLA to mob to site. Ryan to install transfer plates.

1040 mtg conclude - Next meeting 10/17/02 @ 1000

1050 went to ONCA w/ MWH to look at drum area

1100 Roll 30 Photo 21 facing north at trench through drum debris

MWH decided to cap piping at C8 and C10 and eliminate piping or raise elevation of cap

1145 - 1230 lunch

1250 observed activities on ONCA. R. Adams reported

(45)

Jeff E. R. M.

10/10/02

MWH will place piping between C8 and C10 at current grade (1.5 ft shallower than design) of 14 inches below subgrade and will insulate pipe. HHSI placing clay waiting for Great Lakes Soil for testing

1310 Roll 30 Photo 22 facing NW of EMU over ACS Storm drain tile

1315 Spoke w/ L. Crumpton on site activities

1350 Spoke w/ R. Adams. He reported that HHSI not trench C8 to C10 to depth to avoid level B work. MWH to remove risk and just insulate pipe because of proximity to ACS facility.

1400 Start takes on site to begin testing - 25 tests per lift. DML - 15%, density Proctor 11B. HHSI meeting moisture on tests, not compaction - HHSI to continue rolling

1425 Roll 30 Photo 23 facing SW of compacting clay. L. Peters expressed concern to R. Adams regarding compaction near ACS break buildings since HHSI did not recompact subgrade. HHSI to advise if not need compaction - geo textile possible

1510 left site for day

Jeff E. R. M.

(46)

10/15/02

J. Williams

0740

Arrive on site, Sunny, Clear, 45°F

Personnel Present

Lee Orosz

MWH

Doug Drinnan

HHSI

Tim Kirkland

Austgen

Mike Larson

Austgen

Jim Beard

Austgen

Lough Peters

BVSRC

0750

Spoke with Don Parrish, he reported that HHSI will continue to bring clay today for SDPA caps and Great Lakes test. He also reported incorrect practice in testing equipment from last week - correct practice is 112 psi Great Lakes tested section portion and clay was meeting compaction + moisture. HHSI expects to complete majority this week. HHSI has one 2-inch dia. pipe to pressure test at 90 psi.

0815-0830 Off site to buy camera

0830

Observed Austgen connecting conduit at W side of G-WTP to connect MW10C and MW56 to G-WTP.

0840

Roll 31 Photo 1 facing SSW at trench and piping for MW10C.

0850

Observed HHSI spreading and wetting clay

J. Williams

(47)

10/15/02

L. Peters

on SDPA. Observed that HHSI still needs to place a geotextile over the FML at certain basins and storm drain hole. HHSI brought sheepfoot roller to site for compaction.

0915 Roll 31 Photo 2 facing N of HHSI meeting E-W

0920 Roll 31 Photo 3 facing NW at trench and piping for MW56 to G-WTP from MW10C

0925 Spoke with T. Timics, he reported MWH shut down electric and gas lines yesterday when Austgen trenching. Austgen secured gas line and repaired. Austgen pulling electrical out to 100 today.

0940 Walked SDPA with J. Pohl.

1000 Roll 31 Photo 4 facing SW at HHSI rolling perimeter and J. Pohl of MWH reported that HHSI not placing geotextile over FML in storm drain area. HHSI to only place pea gravel and sand.

1025 MWH discussing thermox Krombeek with Dave. MWH disassembled thermox to investigate heat exchanger.

1045 Roll 30 Photo 2 facing N showing inside of heat exchanger - some corrosion on left.

1050 Roll 30 Photo 25 facing N of corrosion + water - cut of tubes and water level reached when unit was flooded.

MWH reported Dave to send out new generator. MWH

J. Williams

(48)

10/15/02

J. J. Petrich

for the primary trench.

1100 Great Lakes on-site for testing. 3 areas need retesting.

1120 Observed Great Lakes testing. HHSI continues to spread water and compact clay on eastern portion of SBPA. Great Lakes retesting location 3 (1st lift) density 114.5 and moisture 13.6%. Great Lakes moved SW 1 foot to perform second test. Location 3 (1st lift - second test) moisture 15.6%, density 110.2 pcf - 98.4% compaction. MWH requested Great Lakes to test third location on NE of original. 99.8% of compaction, moisture 15.4%. Fourth test of 13.1% compaction 124% moisture. Location 2 failed. Great Lakes tested location 1 - failed. HHSI to rework West sloped area.

1150 Earlier HHSI driver knocked over gate and fence E of MWH trailer. Security fence to repair today.

1215 Left site for day

J. J. Petrich
10/15/02

(49)

10/17/02

J. J. Petrich

0730 Arrive on-site, Cloudy, 45°F, SE wind

Personnel Present:

X Lee Orosz	MWH
Dan Petrich	HHSI
Fred Drown	HHSI
Doug Drinnan	HHSI
Jerry Clark	HHSI Ryan
Jerry Springer	Ryan
Terry Frank	Ryan
Kent DeGrate	HHSI
X Leigh Peters	BUSPC

Today's Activities

(1) HHSI to continue CNCA cover work

(2) Bait Langdon to mobilize

0750 Roll 50 Photo 26 facing NE showing MWHDC and shilups for connections to GWP.

L. Orosz reported concrete slab to be poured at both MWHDC and MWSB.

0755 Gate and fence to ACS not repaired. L. Orosz did not know schedule. L. Peters to ask how site is secured during night.

0810 Spoke with D. Petrich. He reported that HHSI to spread on-site clay and hope to compact today. No clay coming in due to rain yesterday. Schedule for completion pushed

J. J. Petrich

(50)

10/17/02

J. Adams

back through next week. Dawn also reported ONCA cap west of overhead pipe bridge passed inspection and moisture.

0830 Reviewed ACS documents

0840 spoke with R. Adams. He reported that HHSI should place geotextile over FML as per drawing in minutes. BLA to mob today and have H+S kickoff today. Drilling to start next Wednesday. Meeting scheduled for 900. MWH reported Area Survey to be on site Tuesday to resurvey D39, MWOC and ONCA SVE well locations. L. Peters questioned T. Trivics whether P116 should be surveyed. He reported that the location was assessed by R. Stern and he found it within the precision of measuring instruments.

0915 PVGR reported MW10C is 5 foot screen in 2nd sand layer - MWH to pump at max 1 gpm. restriction will be agnitive. MWS6 to stay at 1 gpm based on past observations to keep consistent.

0930 Zull 3D Photo 27 facing SE of Ryan panning pad at MWS6

1000 Weekly Construction Meeting - Attendees * plus
P. Vegt MWH R. Adams MWH

J. Adams

(51)

10/17/02

J. Adams

T. Lewis

MWH

C. Smith

MWH

T. Trivics

MWH

J. Pohl

MWH

J. McDonough

HHSI

Bill Strickland

BLA

Via phone

M. Adler

EPA

T. Klugworth

MWH

Mark Trivics

C. Daly

MWH

H+S: No incidents. Austgen sub track hit fence, to be repaired today. Kickoff meeting with BLA today. GWTP Op at 40 gpm - down Monday for hook up to MW10C and MWS6. Austgen hid main gas line and electric line, lines deenergized and repaired. Ryan to install heat transfer plates and MWH to review confined space.

ISVE thru-roof down for inspection. MWH working with Durr. MWH negotiating with Global for 2000 cfm unit.

ONCA ISVE: BLA mob today, start drilling Wednesday.

H+S kickoff today. Area Survey to locate all wells Tuesday. MWH still waiting for submittals.

ONCA COVER: Intrusive work complete. HHSI to test one 2-inch line. HHSI placed 40% of clay. Expect 4-5 days of placement - 3 days for shore + fabric.

Fabric to be delivered Monday. Tuesday next week NE portion - 50 ft section of pipe placed shallow not insulated.

LOOK AHEAD: GWTP, HHSI, BLA + Ryan

1045 mtg conclude, Next mtg 10/21/02 at 1000

J. Adams

(52)

10/17/02

J. Adams

1100

Discussed drums on DNCA w/ R. Adams + P. Vyt.
They reported most drums not intact and relocated.
to still be treated by ISVE. MNH reported that
it was not aware of laborer's comment of
drums 3' high and based on field observations
felt that majority of drums to be carcasses.
MNH also referenced drum disposal areas
that were removed and how majority of drums
were rusted and deteriorated and expect the
same for DNCA.

1130-1200 Spoke with LMC on site activities.

1200-1300 LMA site for lunch

1300 H+S Mtg with Brent Longyear.

Project Overview: - Introductions and drilling
task description - clay depth at 15 ft logs.

Bill Stucky - BIA site supervisor

H+S Mtg: potential exposure to product -
volatiles. 2p hours - 700-1030 inside ACS.

BIA can prep/cleanup before and after. -

130 AM start. Level B PPE required for job

BIA + MNH to coordinate exclusion zone with

ACS. - Spoils to collect on plastic and piece

in roll-off. - BIA daily tailgate mtgs,

MNH to hold weekly H+S mtgs - Air monitoring

at each rig and perimeter with PID, O₂, LEL.

(53)

10/17/02

J. Adams

Perimeter monitoring every 30 min by BIA
MNH to provide additional air monitoring
with PID to establish exclusion zone.

- Wind socks on rigs. - BIA to coordinate
with HHSI and MNH - MNH to collect split
spoon at bottom interval of screen to ensure not
into clay. MNH to continuously log air sparge
points. - Open issue of whether grout to
surface. - MNH discussed new piping: -
6" well - 8 1/4 ID - 12 1/8 OD augers

Schedule: Start Wednesday pending weather
for HHSI, estimate 3 weeks for drilling -
max of 20 drilling days.

• Equipment: 2 drill rigs, 1 probe, only 2
pieces of equipment operating at a time.
BIA to place plastic under rigs to keep
cap clean.

1400 Mtg conclude - Site walk in 15 minutes.

1430 Walk through of DNCA with BIA

1510 Left site for day

~~J. Adams~~
10/17/02

(54)

Paul Haley

10/24/02

7:00

ARRIVED ONsite @ JACS, Weather;
Temp 41°F, Light to No wind, OVERCAST
periods of RAIN.

Activities Scheduled for today

- 1) RYAN IS WORK ON the Thermal Desorber unit.
- 2) HARD Hat is Placing Clay in the ONsite AREA.
- 3) Boart Longyear is preparing to start installing the wells for the ONsite ISVE System.

Personnel ONsite:

7:20

Lee OROSZ	MWIT
Doug Drivan	Keldma
DAN Petrich	HHSI
Chad Smith	MWIT
Todd Lewis	MWIT
A. Thomas	BLY
William Stokoy	BLY
Kevin O'Brien	BLY
Jesse Munsell	AREA Survey
James Treszka	AREA Survey
LARRY LUCK	Great Lakes Soil

(55)

Paul Haley

10/24/02

7:30 Attend Boart Longyear's Daily Product AND H&S MEETING.

8:00 AREA Survey is shooting elevations ex the ONsite Clay

8:27 MWIT is look to schedule the work on the Thermal Exchange unit ON Monday 10/28/02.

Talk w/ Mr. Tim's of MWIT, he will conduct the ACS Health & Safety MEETING for Tom Froman of ACS, Tom will Repeat the H&S MEETING Next week with All the Drillers. Chad Smith of MWIT, Tom Tim's - MWIT, Boart Longyear 3 Staff members AND Hard Hats Forman will attend a Coordination MEETING AND Health & Safety Talk.

9:03 Picture 5 Role 31 Facing South @ ONsite Clay Cap AREA of Great Lake Soil + Test AND MWIT Survey in Nuclear Dens. Testing.

9:10 AREA Survey is locating 6 Probe locations for Boart Longyear to Start.

(56)

Chad Kelly 10/24/02

9:45 BOART Longyear is Receiving
There ARE ORIENTATION AND HBS
MEETING.

Rob Adams, Informed me the
Drawing Detail on the wells
will change from 6" sand over
screens to a 1'0 SAND LAYER
OVER SCREEN.

10:00 Health & Safety Meeting w/ Production
In attendance:

Travis Klingbeil by phone MWIT

Pete Vogt by phone MWIT

John Pohl MWIT

John McDough HHSI

Todd Lewis

Rob Adams

Kevin Heller by phone WSEA

Mark Travers by phone ENVIRON

- HBS, No ACCIDENTS, No VAPOR
ISSUES.

- BOART Longyear is go through there
level B re-breather AND LIT TESTING

- GWTP Running @ 40 gpm
w/ Extraction from PGCS, offsite, onsite.

(57)

Chad Kelly 10/24/02

- GWTP Plant will be Down Next
week for the installation of the
Heat exchanger. This will take
2-3 days. will require Confine
space ENTRY, Hot work Permit
AND Heavy Equipment.

TSVE offsite unit is still having
problem w/ thermal Oxidizer, A
Service Contractor will be onsite
today to Camera the unit w/ a
fiber optic camera if ever there
check out w/ thermal Oxidizer.
MWIT will be brought back online
in one two weeks.

Still Bottom Pond AREA Haul that
is 90% finish and approved.

Haul that anticipates to complete
Clay placement tomorrow w/ all
Nuclear Density being performed and
approved. Next week Haul that
will place the Geotexture &
Rock.

Boart Longyear will start
Drilling on Monday with Push Prob
Starting today.

(58)

Chad Smith 10/24/02

The Second Thermal Oxidizer is
Be special and is look to be
purchase in the next couple of weeks
there is a 14 to 16 week lead
time on this unit.

LOOK AHEAD

- 1) GWTP will start installation of
the thermal Plats.
- 2) ISVE off Site AREA will be restarted
- 3) Bonet Longyear will continue.
- 4) HED Art will be finalizing there
work.

Kevin Heller Requested Picture of the
thermal Oxidizer to show the public
the problems that are occurring. —
Groundwater Sampling, One
of the Residential wells need
to be resampled Do to A MBL
Exceedance, this will make
the third time this well has been
resampled, the first time was
Do to lost of sample in shipment.
Chad Smith will sample the well
as soon as possible.

Chad Smith

(59)

Chad Smith 10/24/02

11:50 Bonet Longyear is setting up on their
first Boring.

12:03 Picture 8 Role 31 Facing N @
West portion of Still IS Home Gap
of Bonet Longyear taking Geoprobe
Samples.

12:05 Picture 7 Role 31 Facing N @
AS1 Boring location of Soil
Sample from 0 - 40 feet.

NOTE Shimming is occurring @ Approximately
5 to 5 1/2 feet bls.

12:10 Bonet & MWIT ARE performing Continuous
Air monitoring of the leaks
Breathing Zone AND EXCLUSION ZONE
perimeter.

12:20 Observed Gray Clay @ 46'0".

12:21 Picture 8 Role 31 Facing NW @
Sample Point AS1 of the Gray Clay.

12:22 Bonet is setting up to install
the first Sparg well. 3 risers
Screen is being Decontaminated.

12:36 Finished Air Sparg AS1 well.
Schedule 40 Screen and RISER
@ 16'0"

(60)

Chad S. 10/24/02

12:53 Checked in w/ Mr. Campbell of BISC making my Daily Report.

Boat longyear is setup on AS2 AND MS began pushing probes.

12:56 ~~water~~

water was encountered @ 5 to 9 feet - 15 ON AS2 Boring Location

13:33 Everest VIT Completed there

Fiber optic Camera of the thermal Oxidizer. They started just after lunch. The unit appeared OK there was some buildup.

13:41 Boat is pulling off to get Air. AND Return to Run the last 4' foot - AS2.

14:35 Installing AS2 Sparg well. Photo 9 Miss Q.

14:38 Picture 10 Role 31 Facing NW @ AS2 OF BOAT longyear installing a sparg well SS Schedule 40w/ 601 Slotted Screens.

15:03 Started AS3

15:34 Started installing the Sparg well.

(61)

Chad S. 10/24/02

15:41 Picture 11 Role 31 Facing NW

@ AS3 of Boat longyear placing gravel in the Sparg well

16:02 Finished AS3 mobilizing to AS4.

Pulled off for Tomorrow.

16:21 Left Site.

Chad S. 10/24/02

⑥2

Chad Schilling 10/25/02

6:48

ARRIVED ON SITE @ ACS WEATHER;

Temp 42°F Overcast AND RAINING.

Activities Scheduled for Today

- Continue installing the onsite wells for ISVE System w/ Boert Longyear.
- Finish Clay placement AND Compaction w/ Harel Airt.
- GWTP Continue Evaluating the thermo Oxidizer AND preparing for installation of the heat exchanger Plats.

7:00

Signed in @ GWTP.

7:30

Boert Longyear ARRIVED.

The following Personnel ARE Present:

Lee OROSE	mwit
Chad Smith	mwit
Kevin O'Brian	Boert
William Stedler	Boert
Alene Thomas	Boert
Tom Evers	Ryan
Jesse Mansell	AREA Survey
James Treszka	AREA Survey

⑥3

Chad Schilling

10/25/02

7:45 Called Ryan Day for Drillers.

Ryan AND AREA Survey are onsite for GWTP and onsite Clay Survey

Returning to office.

[Handwritten signature]
10/25/02

(64)

Margaret M. Clark

10/29/02

0745 Arrive onsite. Weather: 45°F, cloudy, light rain begins to fall.

0800 Sign in at WWTP. Talk w/ Tom Tinic about today's activities. Boart Longyear is onsite to continue drilling in onsite area.

0830 T. Tinic describes work going on in treatment plant. Continue working on thermal oxidizer. Tank is being cleaned out before heat exchanger can be installed.

0900 Walk onsite to observe drilling activities. Boart getting ready to drill first well for today. All six air sparging wells have been installed. The last three were put in yesterday. Chad Smith of MWt is working w/ Boart. He said if the rain continues, they will probably only finish one or two wells today. Area survey is also onsite performing a locate of the conveyance piping.

1000 Roll 31 photo 12 facing W. Boart Longyear installing SVEA.

1015 Roll 31 photo 13 facing W. Boart Longyear finishing up at location.

1020 Walk back to treatment plant. Work continues on therm oxidizer.

Margaret M. Clark

10/29/02 Margaret M. Clark

(65)

1045 Chad Smith walks back to plant. Boart has moved to second location. Because the rain has continued this will be the last spot today.

The following personnel are present:

Lee Grosz	MWt
Jesse Munsell	Area Survey Co.
James T. Tressler	Area
Jerry Clark	Ryan
Brian Smiley	Boart
Chad Smith	MWt
Daniel Harrison	Boart
Dave Juedes	BLY
Alan Thomas	BLY
Kevin O'Brien	BLY
Tom Evans	Ryan
Tim Kirkland	Austgen
Tom Tinic	MWt
Mike Bristley	Austgen
Joe Marcinia	Austgen

1130 Boart now installing SVE well 51. The light rain continues. No damage to cap yet, but in moving to this location a small repairable rut was created.

1145 Roll 31 Photo 14 Facing W, photo of Boart installing SVE well 51 on onsite area.

Margaret M. Clark

(66)

Margaret M. Clark

10/29/02

1200 Boart finishes with #51. Boart has been performing air monitoring throughout work.

PID readings of cuttings for well 51 were 2.0. A 6.0 was obtaining at hole.

1300 Austgen has cut an opening in tank T2 for new connection piping. Lee Orsz is working to pump out the remainder of the sludge in the tank to the sludge press.

1330 Spoke w/ C. Smith. Boart will be able to do some geoprobing this afternoon b/c the weather has improved.

1345 Lee is mixing water w/ sludge in T2 so it can be pumped. Once cleaned out, the heat exchanger will be installed in this tank.

1400 Check back in Tx. Plant where T.

Tiaries & L. Orsz are working on cleaning T2. Lee is now inside the tank shoveling out sludge.

Opening in tank (cut earlier today) is approx. 4 ft. diameter.

I asked T. Tiaries this morning about a confined space entry permit. Tiaries said by the time anyone went in, there would be a large opening cut in the side (which they did) and there are two openings in the top, so it is not a confined space anymore.

Margaret M. Clark.

(67)

10/29/02

Margaret M. Clark

1430 Boart Longyear is using geoprobe w/ Chad Smith.

1430 Roll 31 photo 15 facing SW. Boart using geoprobe at location approx. 50ft west of the SW corner of ACS changing room building.

1435 Light rain continues.

1500 Leave site.

~~Margaret M. Clark
October 29, 2002~~

Margaret M. Clark

⑥⑧ Margaret M. Clark 10/31/2002

0745 Arrive onsite. Weather: partly sunny, 45°F. Site wet due to early morning rain.

0800 Sign in at treatment plant. Talk to D. Petrich of HHSI. The geotextile will be delivered today for perimeter of the onsite cap in the still bottom ponds area. Monday HHSI plans on returning to site to finish up along the edge of the cap.

0830 Talk to Chad Smith of MWH. No drilling today due to wet site conditions. Do not want to cause any damage to cap w/ moving rig around. Yesterday, BLY was able to install five of the SVE wells & complete all of the soil sampling needed. Smith explained that the plan required sampling to ensure they were not drilling into the clay. In the offsite cap, they sampled as they drilled. C. Smith thought it would be more time efficient to sample separately this time using a geoprobe.

The sample locations are approximately every other well on the cap perimeter (11 locations).

The six air sparge wells were also sampled. As of today, all six air sparging wells are installed as well as seven SVE wells.

0915 Photo 16 & 17 Facing west in WWTP. Photo Roll 31st Margaret M. Clark

10/31/2002 Margaret M. Clark

⑥⑨

of opening in tank T2. Tank has been cleaned out & fitting is currently being welded into opening. 10:00 Weekly meeting begins. Notes to follow.

PERSONNEL ON SITE

Lee Orosz MWH

Terry Frisk Ryan

Bill Stuckey BLY

Chris Harrison BLY

Dave Juades BLY

Chad Smith MWH

Daniel Harrison BLY

Margaret Clark BVSPC

Dan Petrich HHSI

John McDough HHSI

Prahbakar IDEM

Pete Vaght MWH

Rob Adams MWH

Meeting notes:
In attendance: Lee Orosz (MWH); Prahbakar (IDEM); Chad Smith (MWH); Bill Stuckey (BLY); Chris Harrison (BLY); M. Clark (BVSPC); John McDough (HHSI); Pete Vaght (MWH); via phone: Mark Travers, John Pahl, Chris —, Todd Lewis (MWH), Kevin Adler (USEPA).

Margaret M. Clark

(70) Margaret M. Clark

10/31/02

-H+S-

• In GWTP: there was a confined space situation this week in cleaning out T2. Per Lee Orosz, the O₂ levels were monitored, the tank was ventilated, water was sprayed on the mat'l in the tank to minimize fumes before anyone entered the tank. M. Clark asked whether a permit was secured for the work done Tues. L. Orosz stated a permit had been obtained & all precautions were taken. The tank (now that it's cleaned) is no longer a permit requiring confined space.

• HHSI: nothing to report

• Boart Longyear: drilling in level B, perform air monitoring around exclusion zone. Air monitoring results: cuttings 13-300/400 (PID); perimeter of zone 1 < @ downwind locations. At hole completion, decor. Cuttings wrapped in plastic, washwater drummed & will be treated at GWTP.

-GWTP

• Monday plant was down for T2 cleaning, sand filter cleaning, demister changed out; sludge from T2 put back thru system. MW56; IOC boxes set, controllers here, tied into PLC, waiting on float switch; next week both wells should be online.

Margaret M. Clark

10/31/02

Margaret M. Clark

(71)

• Heat exchanger should be installed Tuesday or Wed.
• Flow at 15 gpm; thermox needs to be dried out by Mon/or Tues. Then plant will operate at more regular flow.

-Offsite SVE system: system was inspected last week. No problems were discovered. The unit was reassembled. Thermal oxidizer ^{unit} ~~the~~ installation is wet. Once dried, will attempt to put online. If not working, then will investigate further. Drying will take a few days. If all goes well, it can be running next week.

-Onsite SVE: installing SVE wells. Thirteen wells are complete (seven 4" SVE wells & six 1" ASW). Characterization sampling complete. Boart will bring out second rig. Twenty one DPN & eighteen SVE wells yet to be installed. Expect six-seven wells/day. Could be complete in two weeks.

-PNB (private well) was resampled by C. Smith. Results in 2-3 ^{more} weeks. C. Smith talked to J. Garmon's daughter who was concerned about the frequent sampling. Smith explained it & directed any further concern to Kevin Adler.

• Yard piping design finalized. The only change from original design is that the piping will be on top of clay w/lin gravel layer.

Margaret M. Clark

(72)

Margaret M. Clark

10/31/02

ONSITE SVE

- Yard piping design will be submitted to the agency this week.
- Blower shed: working on finalizing drawings for vendor.
- Yard piping work expected to start in three weeks.
- Onsite Interim Cap:
 - Clay cover completed last week. Layout for gravel road done. Area survey has given info to HHSI so, John McDonough can review & make sure thickness is correct. Geotextile will be delivered today. Monday HHSI will return to finish in two-three days.
 - T. Lewis asked if all requirements (moisture, compaction, etc.) have been met & documented. John McDonough said yes.
 - Next Thurs. - site walk w/ HHSI to approve work.
- Look ahead: GWTP operation; well installation; road installation; HHSI demol.; offsite SVE online; non permit confined space to install heat exchanger; discussed pressurizing line 6(?) (line around SDP cap) so that if any damage is done to the line while drilling, it can be addressed.
- Next meeting: November 7, 2002 @ 10 am.
Margaret M. Clark

10/31/02 Margaret M. Clark

(73)

1100 Spoke w/ Lee Orosz about confined space permit. Lee told me that I was misinformed on Tuesday. He showed me the permit for cleaning the tank and explained that a hole was cut out on Monday. Low O₂ levels were detected, so a fan was placed in the opening on top to ventilate. This was done all night Monday until Tues. On Tues, a larger hole was cut in side, as much material as possible was pumped out before anyone entered the tank.

1115 Not much additional work will occur today. Return to office.

~~Margaret M. Clark
October 31, 2002~~

Margaret M. Clark



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #1

Date: 09-26-02 Time: 07:25

Photographer: Leigh Peters

Description: Photo facing south showing ECI spreading topsoil in the Kapica-Pazmey area of the OFCA.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #2

Date: 09-26-02 Time: 07:30

Photographer: Leigh Peters

Description: Photo facing south showing the western anchor trench, partially backfilled.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #3

Date: 09-26-02 Time: 07:35

Photographer: Leigh Peters

Description: Photo facing south showing the root zone material placed over the FML.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #4

Date: 09-26-02 Time: 08:10

Photographer: Leigh Peters

Description: Photo facing southeast showing the repaired 18-inch diameter storm water piping and the HDPE piping for the ONCA SBPA ISVE system.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 29 Photo #5
 Date: 09-26-02 Time: 09:10
 Photographer: Leigh Peters
 Description: Photo facing southwest showing HHSI
 working on the ONCA and stockpiles of
 native material removed during trenching
 activities.

Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 29 Photo #6
 Date: 09-26-02 Time: 09:15
 Photographer: Leigh Peters
 Description: Photo facing east showing the piping from
 the ONCA extraction wells to GWTP that
 was damaged by ACS personnel.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 29 Photo #7
 Date: 09-26-02 Time: 11:25
 Photographer: Leigh Peters
 Description: Photo facing south showing ECI watering
 the access road for dust control.

Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 29 Photo #8
 Date: 09-26-02 Time: 11:30
 Photographer: Leigh Peters
 Description: Photo facing north showing OFCA ISVE
 well SVE-38 that was damaged by ECI
 during engineered cover construction
 activities.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 29 Photo #9
 Date: 09-26-02 Time: 12:05
 Photographer: Leigh Peters
 Description: Photo facing east at ground showing the repair to the 2-inch diameter HDPE conveyance piping from the ONCA extraction wells to the GWTP.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 29 Photo #10
 Date: 09-26-02 Time: 12:10
 Photographer: Leigh Peters
 Description: Photo facing northwest showing damage to piezometer P39, located on the northeast portion of the ONCA.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #11

Date: 09-26-02 Time: 13:30

Photographer: Leigh Peters

Description: Photo facing southwest showing the ONCA conveyance piping stickup at the location of the future blower shed.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #12

Date: 09-26-02 Time: 13:30

Photographer: Leigh Peters

Description: Photo facing west showing a trench for the ONCA SBPA ISVE system conveyance piping and the sandbags placed on the piping for pressure testing.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #13

Date: 09-26-02 Time: 13:45

Photographer: Leigh Peters

Description: Photo facing south at ground showing product from a buried drum carcass that splattered onto the ONCA SBPA subgrade after a rain event.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #14

Date: 09-26-02 Time: 13:50

Photographer: Leigh Peters

Description: Photo facing southwest of debris removed during trenching activities in the ONCA SBPA.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 29 Photo #15
 Date: 09-26-02 Time: 14:35
 Photographer: Leigh Peters
 Description: Photo facing east showing HHSI pressure testing line 7 to 90 psi for 15 minutes.

Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 29 Photo #16
 Date: 09-26-02 Time: 14:50
 Photographer: Leigh Peters
 Description: Photo facing north showing ECI discing the root zone material in OFCA in order to add moisture and meet the compaction and moisture requirements for the material.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #17

Date: 10-02-02 Time: 08:17

Photographer: Leigh Peters

Description: Photo facing northwest showing the geotextile and gravel for the OFCA access road to the blower shed.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #18

Date: 10-02-02 Time: 08:25

Photographer: Leigh Peters

Description: Photo facing west showing the replacement riser and liner boot that needs replacement at OFCA ISVE well SVE-38. Note the angle of the riser pipe.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #19

Date: 10-02-02 Time: 08:25

Photographer: Leigh Peters

Description: Photo facing west showing the replacement riser and liner boot that needs replacement at OFCA ISVE well SVE-38.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #20

Date: 10-02-02 Time: 08:45

Photographer: Leigh Peters

Description: Photo facing southwest showing OFCA piezometer P114 and the root zone material and topsoil removed for the placement of the concrete ring.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #21

Date: 10-02-02 Time: 09:10

Photographer: Leigh Peters

Description: Photo facing east showing the 8-inch diameter HDPE pipe stickup at the future ONCA ISVE blower shed and HHSI trenching.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #22

Date: 10-02-02 Time: 09:12

Photographer: Leigh Peters

Description: Photo facing north showing the drums removed from trenching activities in the central portion of the ONCA SBPA.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #23

Date: 10-02-02 Time: 09:12

Photographer: Leigh Peters

Description: Photo facing southwest showing the central trench in the ONCA SBPA and product encountered from the buried drums.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 29 Photo #24

Date: 10-02-02 Time: 11:55

Photographer: Leigh Peters

Description: Photo facing southeast of ECI placing gravel for the OFCA access road to the blower shed.



Site: American Chemical Services, Inc.
 Proj. # 46526
 Roll: 29
 Date: 10-02-02
 Photographer: Leigh Peters
 Photo #25
 Time: 13:30
 Description: Photo facing northeast showing HHSI trenching through the buried drum area in the ONCA SBPA and encountering buried drums.



Site: American Chemical Services, Inc.
 Proj. # 46526
 Roll: 29
 Date: 10-02-02
 Photographer: Leigh Peters
 Photo #26
 Time: 13:33
 Description: Photo facing southeast showing the drums removed from the central trench in the ONCA SBPA.



Site: American Chemical Services, Inc.
 Proj. # 46526

Roll: 29 Photo #27

Date: 10-02-02 Time: 13:35

Photographer: Leigh Peters

Description: Photo facing east showing the bobcat
 trencher removing drum debris near the
 buried drum area in the perimeter trench.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #1

Date: 10-02-02 Time: 13:40

Photographer: Leigh Peters

Description: Photo facing north showing HHSI
 removing a drum from the perimeter
 trench.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 30 Photo #2
 Date: 10-02-02 Time: 14:30
 Photographer: Leigh Peters
 Description: Photo facing east showing the drums and
 product within the trench.

Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 30 Photo #3
 Date: 10-02-02 Time: 15:10
 Photographer: Leigh Peters
 Description: Photo facing south showing HHSI covering
 the excavated drums with sand to minimize
 potential vapors.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #4

Date: 10-02-02 Time: 15:25

Photographer: Leigh Peters

Description: Photo facing east showing the trench that was covered with sand after the drum debris was removed.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #5

Date: 10-03-02 Time: 07:55

Photographer: Leigh Peters

Description: Photo facing east of HHSI placing backfill in trench A. Note that the trench in the foreground was filled and compacted with a Wacker packer.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #6

Date: 10-03-02 Time: 08:45

Photographer: Leigh Peters

Description: Photo facing north showing the OFCA
ISVE system scrubber temperature probe
and precipitation on probe.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #7

Date: 10-03-02 Time: 13:15

Photographer: Leigh Peters

Description: Photo facing east showing HHSI
breaking the concrete slab located on the
eastern portion of the ONCA SBPA in
order to trench for conveyance piping.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #8

Date: 10-03-02 Time: 14:05

Photographer: Leigh Peters

Description: Photo facing west showing the seeding and topsoil of the OFCA engineered cover.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #9

Date: 10-03-02 Time: 14:50

Photographer: Leigh Peters

Description: Photo facing north showing the location of trench C near the ACS employee break building.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 30 Photo #10
 Date: 10-09-02 Time: 07:55
 Photographer: Leigh Peters
 Description: Photo facing west showing the debris removed from trenching activities and HHSI excavating an area in which to bury the debris outside of the SVE well field.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 30 Photo #11
 Date: 10-09-02 Time: 08:00
 Photographer: Leigh Peters
 Description: Photo facing southwest showing HHSI burying the excavated drum debris outside of the ONCA ISVE well field, but within the limits of the cap.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #12

Date: 10-09-02 Time: 09:00

Photographer: Leigh Peters

Description: Photo facing west showing HHSI removing soil from around the drain tile located on the northern boundary of the cap. HHSI encountered black, oily soil under the tile.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #13

Date: 10-09-02 Time: 09:35

Photographer: Leigh Peters

Description: Photo facing northwest showing HHSI fusion welding conveyance piping and the clay for the interim cover.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #14

Date: 10-09-02 Time: 10:30

Photographer: Leigh Peters

Description: Photo facing east showing HHSI backfilling trench C.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #15

Date: 10-09-02 Time: 10:45

Photographer: Leigh Peters

Description: Photo facing north showing HHSI laying HDPE conveyance piping with a tee for connection to a dual phase extraction well in trench C.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #16

Date: 10-09-02 Time: 11:25

Photographer: Leigh Peters

Description: Photo facing north showing the completed engineered cover for the OFCA.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #17

Date: 10-10-02 Time: 07:50

Photographer: Leigh Peters

Description: Photo facing southwest showing MAL fitting the horizontal portion of the FML boot around OFCA ISVE well SVE-38.



Site: American Chemical Services, Inc.
Proj. #: 46526

Roll: 30 Photo #18
Date: 10-10-02 Time: 08:25

Photographer: Leigh Peters

Description: Photo facing southwest at ground showing
MAL extrusion welding the boot to the
liner at OFCA ISVE well SVE-38.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #19

Date: 10-10-02 Time: 08:43

Photographer: Leigh Peters

Description: Photo facing southwest of MAL testing the
welded seams around OFCA ISVE well
SVE-38 with the vacuum box.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #20

Date: 10-10-02 Time: 09:20

Photographer: Leigh Peters

Description: Photo facing west showing the finished grading around OFCA ISVE well SVE-38.



Site: American Chemical Services, Inc.

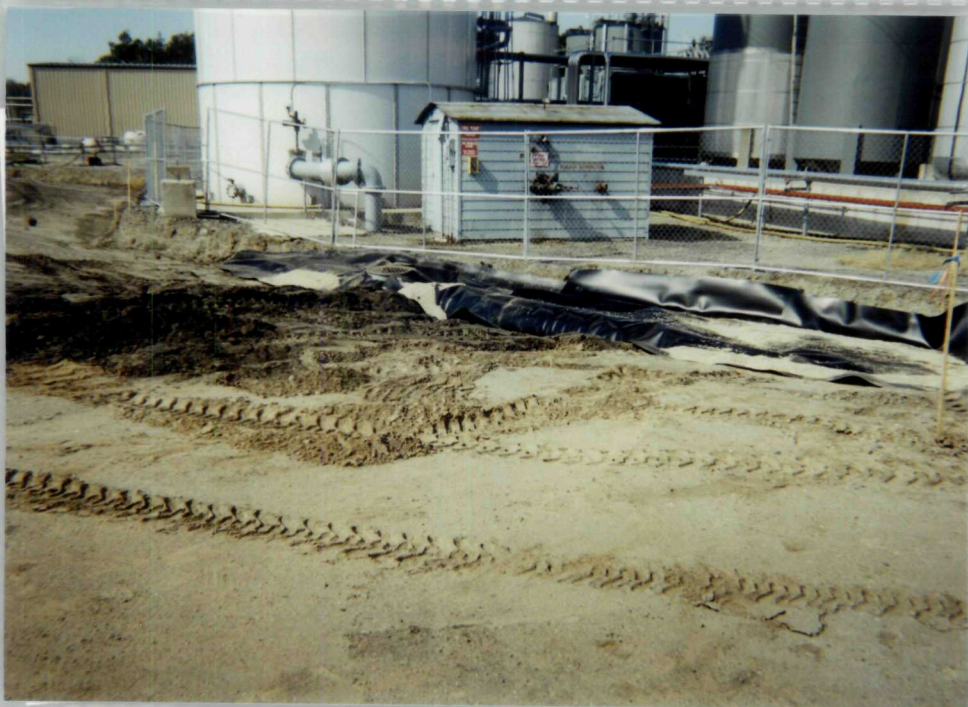
Proj. #: 46526

Roll: 30 Photo #21

Date: 10-10-02 Time: 11:00

Photographer: Leigh Peters

Description: Photo facing north showing the trench through the drum debris encountered on the northeast portion of the ONCA SBPA area.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 30 Photo #22

Date: 10-10-02 Time: 13:10

Photographer: Leigh Peters

Description: Photo facing northwest showing the FML placed over the storm drain located near the northern portion of the ONCA SBPA cap boundary.



Site: American Chemical Services, Inc.

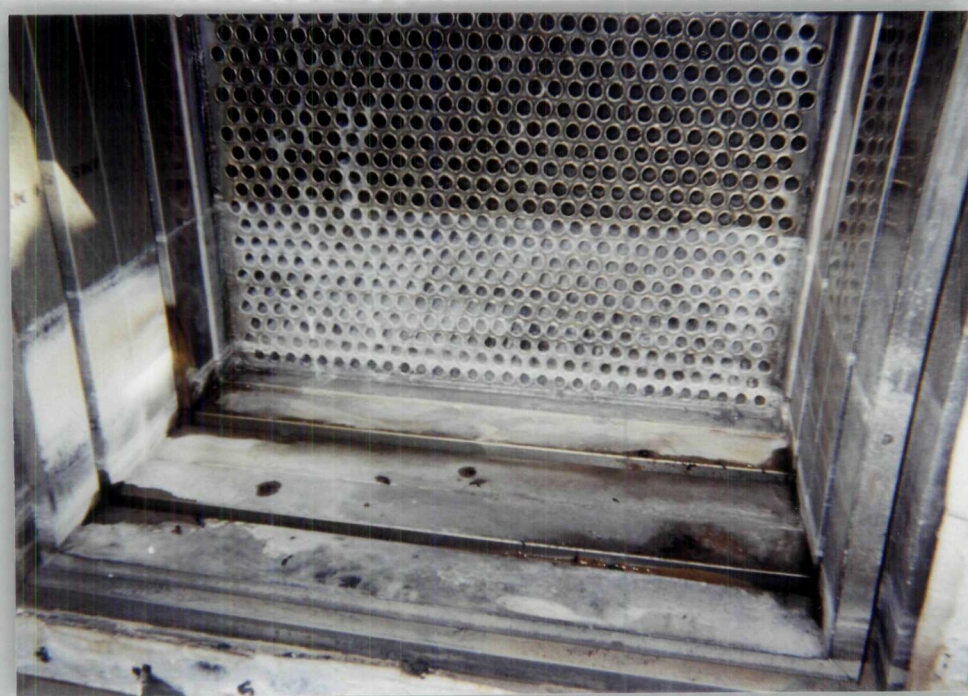
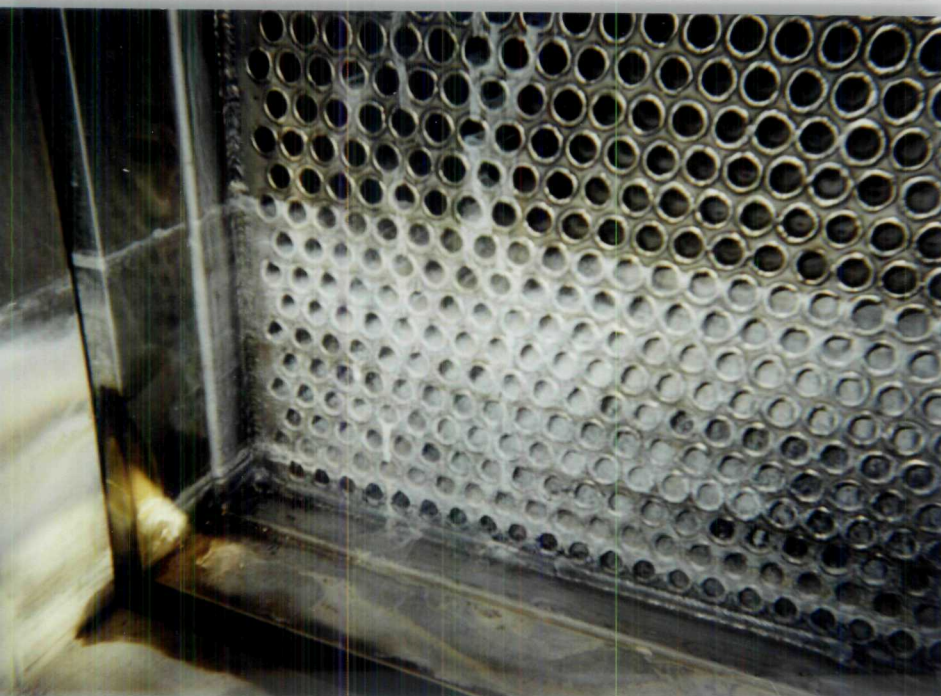
Proj. #: 46526

Roll: 30 Photo #23

Date: 10-10-02 Time: 14:25

Photographer: Leigh Peters

Description: Photo facing southwest of HHSI compacting clay for the interim cover construction on the ONCA SBPA.



Site: American Chemical Services, Inc.
 Proj. #: 46526

Roll: 30 Photo #24
 Date: 10-15-02 Time: 10:45

Photographer: Leigh Peters

Description: Photo facing north showing the inside of the OFCA ISVE system thermal oxidizer heat exchanger and some corrosion located on the left hand side.

Site: American Chemical Services, Inc.
 Proj. # 46526

Roll: 30 Photo #25
 Date: 10-15-02 Time: 10:50

Photographer: Leigh Peters

Description: Photo facing north showing the inside of the OFCA ISVE system thermal oxidizer heat exchanger and the location of the water level after the system flooded.



Site: American Chemical Services, Inc.

Proj. # 46526

Roll: 30 Photo #26

Date: 10-17-02 Time: 07:50

Photographer: Leigh Peters

Description: Photo facing northeast showing MW-10C and stick-ups for the connections to the GWTP for future pumping from the well.



Site: American Chemical Services, Inc.

Proj. # 46526

Roll: 30 Photo #27

Date: 10-17-02 Time: 09:30

Photographer: Leigh Peters

Description: Photo facing southeast showing Ryan Construction pouring the concrete pad at MW-56.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #1

Date: 10-15-02 Time: 08:40

Photographer: Leigh Peters

Description: Photo facing southwest showing the trench and piping installed to connect MW-10C to the GWTP.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #2

Date: 10-15-02 Time: 09:15

Photographer: Leigh Peters

Description: Photo facing north showing HHSI wetting clay to meet the moisture requirements.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #3

Date: 10-15-02 Time: 09:20

Photographer: Leigh Peters

Description: Photo facing northwest showing the trench and piping connecting MW-56 to the GWTP from MW-10C



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #4

Date: 10-15-02 Time: 10:00

Photographer: Leigh Peters

Description: Photo facing southwest showing HHSI rolling clay located along the perimeter of the ONCA SBPA interim cover.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #5

Date: 10-24-02 Time: 09:03

Photographer: Chad Gailey

Description: Photo facing south showing Great Lakes testing the ONCA SBPA clay cover and MWH surveying the test location

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #6

Date: 10-24-02 Time: 12:03

Photographer: Chad Gailey

Description: Photo facing north showing BLA taking geoprobe samples from the ONCA SBPA.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 31 Photo #7
 Date: 10-24-02 Time: 12:05
 Photographer: Chad Gailey
 Description: Photo facing north showing the location
 of ONCA ISVE point AS-1 and the
 sample collected from 0 to 4 feet bgs.

Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 31 Photo #8
 Date: 10-24-02 Time: 12:21
 Photographer: Chad Gailey
 Description: Photo facing northwest showing the
 sample from ONCA ISVE location AS-1
 of the gray clay.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #10

Date: 10-24-02 Time: 14:38

Photographer: Chad Gailey

Description: Photo facing northwest showing BLA installing sparge well at ONCA ISVE location AS-2.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #11

Date: 10-24-02 Time: 15:41

Photographer: Chad Gailey

Description: Photo facing northwest showing BLA installing packing material at ONCA ISVE location AS-3.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #12

Date: 10-29-02 Time: 10:00

Photographer: Margaret Clark

Description: Photo facing west showing BLA installing
ONCA ISVE well SVE-44.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #13

Date: 10-29-02 Time: 10:15

Photographer: Margaret Clark

Description: Photo facing west showing BLA
completing the installation of ONCA ISVE
well SVE-44.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 31 Photo #14
 Date: 10-29-02 Time: 11:45
 Photographer: Margaret Clark
 Description: Photo facing west showing BLA installing
 ONCA ISVE well SVE-51.



Site: American Chemical Services, Inc.
 Proj. #: 46526
 Roll: 31 Photo #15
 Date: 10-29-02 Time: 14:30
 Photographer: Margaret Clark
 Description: Photo facing southwest showing BLA
 geoprobng at a location approximately 50
 feet west of the southwest corner of the
 ACS employee break building.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 31 Photo #17

Date: 10-31-02 Time: 09:15

Photographer: Margaret Clark

Description: Photo facing west inside of the GWTP showing the opening cut into tank T-2. Tank has been cleaned and fitting is being welded into the opening.